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Overview

The Ontario Research Fund - Research Infrastructure (ORF-RI) program ensures that Ontario's publicly assisted research institutions continue to have competitive, state-of-the-art infrastructure to engage in world-leading research and technology development.

The Large Infrastructure Fund (LIF) component of the ORF-RI program assists institutions in capitalizing on their research strengths by investing in facilities that bring together researchers from a range of disciplines, technology experts and industry partners to generate new ideas, stimulate technology development and support the growth of strong regional economies.

The ORF will contribute a maximum of forty percent (40%) towards the total eligible costs, and the research institution is responsible for obtaining at least sixty percent (60%) from the Canada Foundation for Innovation (through the Innovation Fund), any private funding partners, or its own resources. For further information, please review the CFI guidelines for the [2023 Innovation Fund Competition](#).

The ORF program is a competitive, non-entitlement program. The ORF will not automatically match the CFI awards to Ontario institutions. ORF funding decisions will be based on scientific excellence and strategic value to Ontario. The Ministry may undertake a review of potential economic and/or geopolitical risks associated with the project, which may also impact funding decisions. This will help to ensure that the province is extracting value from research investments.

Purpose of Round

To support institutions in building on existing capacity to accelerate research and technology development or to enhance emerging strategic areas of priority leading to social, economic, health, and/or environmental benefits for Ontarians. The ORF supports a broad range of research and technology development programs including those in natural, social and health sciences, engineering, humanities and the arts, as well as interdisciplinary research.

Application and Adjudication Process

The Ontario Research Fund – Large Infrastructure adjudication process consists of the following independent peer-review process:

- CFI coordinated expert committees will complete a scientific review of full applications;
- Ontario Strategic Value Review panel(s) will provide an in-depth review of the full proposals' strategic value to Ontario and make recommendations on the priority grouping of proposals (high priority, priority or non-priority);
- The Strategic Value Review(s) panel(s) recommendations may be provided to the CFI Special Multidisciplinary Assessment Committee;
- Following receipt of the results of the CFI adjudication process, the ORF Advisory Board will incorporate strategic value considerations into its recommendations on priorities to the Minister of Colleges and Universities;
- The final funding decision rests with the Minister of Colleges and Universities. The Minister may approve applications, approve subject to terms and conditions, or decline applications at the Minister's sole discretion.

Deadline Dates

Institutions must submit full applications by 5PM on July 18, 2022.

Funding

The ORF will contribute a maximum of forty percent (40%) toward the total eligible costs. The research institution is responsible for obtaining at least sixty percent (60%) from the CFI, any private funding partners, or its own resources.

Final determination of the level of provincial funding rests with the ORF. If the project cost decreases after the date of the ORF award, then the ORF contribution will decrease accordingly.

Grants received from other Ontario government ministries or agencies cannot be used to match ORF funding.

Full Application Review

Expert Review (Coordinated by CFI)

- **Research or technology development:** The research or technology development program(s) are innovative, feasible and internationally competitive.
- **Team expertise:** The team comprises the breadth of experience and expertise needed to conduct the proposed research program(s).
- **Team composition:** Principles of equity and diversity were considered in the team composition including in its leadership. There is a commitment to create an inclusive environment where all team members are fully integrated and supported in the research team.
- **Infrastructure:** The requested infrastructure is necessary and appropriate to conduct the proposed research program(s) and optimally enhances existing capacity.
- **Sustainability:** The infrastructure will be optimally used and maintained over its useful life through tangible commitments.
- **Benefits:** The team and its partners have a well-defined plan to transfer the results of the research or technology development program(s). The results are likely to lead to social, economic, health or environmental benefits for Canadians.

Ontario Strategic Review (Coordinated by the Ministry)

The Ontario Strategic Review Panel(s) will be asked to assess the proposals against each of the three strategic value criteria. Panel(s) will be asked to evaluate the strategic impact based on size, complexity and nature of the project.

Panel(s) will also be asked to group proposals into the following priority categories:

- High Priority Proposals – Proposals that are highly aligned with Ontario's priorities and innovation goals.
- Priority Proposals – Proposals that are aligned with Ontario's priorities and innovation goals.
- Non-Priority Proposals – Proposals that are not aligned with Ontario's priorities and innovation goals.

Strategic Value Criteria

Anticipated value to Ontarians as demonstrated by the applicant in the following two categories. Neither category is more important than the other.

While applicants must address both categories, they are encouraged to emphasize those which are most relevant to their project.

The examples of each type of value are illustrative, not exhaustive. Applicants are encouraged to document all benefits associated with their proposal.

- **Economic Benefits**
 - Improving Ontario's productivity and competitiveness
 - Recruiting, retaining and training of highly qualified personnel (HQP)
 - Creating jobs
 - Increasing the development and sustainable use of natural resources
 - Promoting trade
 - Improving efficiency in private and/or public sector
 - Improving regional economic development
 - Enhancing Ontario's global reputation as an innovation hub
 - Expanding access to valuable data assets

- If applicable:
 - Commercialization potential and market analysis
 - Ability to produce spin-off products and/or firms
 - Likelihood of patent and licensing opportunities
 - Knowledge transfer to industry
- **Societal Benefits**
 - Improving health and wellbeing of Ontarians
 - Preserving environmental quality
 - Reducing poverty
 - Engaging and mentoring youth
 - Improving public policy
 - Effecting a profound shift in the understanding of a given discipline
 - Placing Ontario at the forefront of a particular research discipline from an international perspective

In addition, applications must address the Plan for Achieving Impact and End-User Engagement to maximize the likelihood of realizing these benefits. To that end, applicants are strongly encouraged to begin engagement with partners as early as possible.

- **Plan for Achieving Impact and End-User Engagement**
 - A clear and tangible strategy for achieving research impacts
 - Engagement of private sector and/or community partners to encourage the adoption of innovative technologies, practices, procedures, and/or policies
 - The extent to which the project will ensure the next-stage recipients or end-users of the research have been and will be engaged. Next-stage recipients and end- users may include, but are not limited to:
 - Firms
 - Trade associations
 - Clinicians
 - Researchers in the scientific community
 - Non-profit organizations
 - Community groups
 - Government and agencies
 - Track record of collaboration with next-stage recipients and end-users
 - Strength and commitment of interested recipient partners, demonstrated through financial contributions and/ or strong evidence of vested interest in the research outcomes
 - Plan for mitigating potential risks and limitations which may impede the ability to achieve impacts

Regional and National Projects

The lead Ontario institution seeking provincial funding for a national project must submit an ORF application for the Ontario component of the project, explicitly demonstrating the project's benefits to Ontario especially if the project will be located outside of Ontario (how the strategic review criteria will be met – e.g. what is the impact for Ontario). Institutions should ensure that out-of-province partners submit funding applications to their respective governments for their components of the regional/national project.

The ORF proposal should also identify the role, responsibilities and financial commitments of each of the Ontario institutions and demonstrate that the ORF funding requested is in line with the level of participation of the Ontario institution(s) in the national project.

Eligibility

Eligible Applicants

Ontario institutions that are eligible to apply to the CFI Innovation Fund and meet the requirements listed below are also eligible to apply to the Ontario Research Fund for Large Infrastructure Fund. ORF applicants must submit a co-funding application to the CFI 2023 Innovation Fund Competition.

Funding is open, on a competitive basis, to:

- publicly assisted universities
- colleges of applied arts and technology
- hospital research institutes
- Ontario based non-profit research institutions recognized as eligible to receive funding from the CFI as listed on the [CFI Website](#)
- consortia of the above, with one institution as lead applicant, assuming responsibility and accountability for the consortium

Eligible Infrastructure Costs

This fund is intended to support significant research infrastructure made up of a single item or a collection of items.

An eligible infrastructure project involves the acquisition or development of research infrastructure. In line with the CFI [2023 Innovation Fund Guidelines](#), construction costs to build new space or to renovate existing space (including fitting out existing space) which is essential to house and use the infrastructure effectively, are eligible.

All costs must adhere to the *Broader Public Sector Accountability Act – 2010*, including any procurement directives issued thereunder, to the extent applicable.

Final determination of an item's eligibility rests with the ORF, which may make eligibility subject to terms, conditions and limits as set out in the Grant Agreement.

The Ontario Research Fund – Research Infrastructure program stipulates that institutions that incur costs in advance of an Ontario approval do so at their own risk, in the event that provincial funding is not awarded.

Advanced Research Computing Infrastructure

For the purposes of this competition, the Ministry will adopt CFI's definition of "advanced research computing infrastructure". Proposals that include advanced research computing infrastructure and related resources to carry out a research or technology development project are eligible. However, proposals that focus predominately on major, collective and shared advanced research computing infrastructure are not.

Investments in advanced research computing infrastructure are maximized when those resources are shared. For that reason, and similar to CFI's expectation that the Digital Research Alliance of Canada is consulted if applicants are planning to request advanced research computing infrastructure as part of their CFI application, the Ministry's expectation is that you have also consulted with [Compute Ontario](#) if advanced research computing infrastructure is being requested as part of the ORF application given Compute Ontario's role in helping to coordinate advanced research computing resources in Ontario. The engagement with Compute Ontario can take place at the same time you engage the Digital Research Alliance of Canada.

Eligible Partner Contributions

Only contributions to the eligible costs of projects described above can be counted as partner contributions.

In-Kind Contributions

In-kind contributions are defined as non-monetary resources that external partners provide to eligible projects.

Eligible in-kind contributions include the value of:

- capital items that eligible external partners donate to the institution, such as equipment and facilities;

- certain non-capital eligible costs needed to bring the infrastructure into service (eg., professional services and training); and,
- title to real property to be transferred to the institution (unless ownership has been transferred to the institution at the time the application is submitted).

The ORF retains the right to determine eligibility of any in-kind contribution. The ORF may make eligibility subject to terms, conditions and limits.

Assessing the Value of In-Kind Contributions

The ORF policy for assessing and documenting the value of in-kind contributions will be addressed in the Grant Agreement. As a general rule, the ORF will adopt [CFI's policy](#).

The ORF reserves the right to make the final determination of the eligibility and value of in-kind contributions, to disallow expenditures, and reduce the ORF award. To avoid a situation where in-kind contributions may later be deemed ineligible or incorrectly valued, institutions are advised to contact Ministry staff early in the process to confirm the eligibility and valuation of an in-kind contribution.

Project Requirements

Intellectual Property (IP)

For the purposes of this competition, Intellectual Property (IP) refers to anything that may be protected by any intellectual property right including, but not limited to, works, performances, discoveries, inventions, trademarks (including trade names and service marks), domain names, industrial designs, trade secrets, data, tools, templates, technology (including software in executable code and source code format), Confidential Information as applicable, mask work, integrated circuit topographies, documents, or any other information, data, or materials and any expression thereof¹.

The Ministry does not claim any ownership or rights to any IP resulting from ORF-RI funded projects. Such rights are to be determined by the lead institution in accordance with its current IP policy. In cases where a consortium of applicants exists, the policy, as dictated in the Inter-Institutional Agreement (IIA) between the consortium members, will dictate the IP policy. The applicant should describe how ownership and disposition of IP generated from the project will be determined. The Ministry may request a copy of the institutional and/or relevant IP policy. Applicants are expected to make mutually agreeable commercialization arrangements with their private sector partners.

Exploitation of Intellectual Property

Applicants shall use their best efforts to ensure intellectual property created or developed through an ORF-RI funded project is exploited in a way that maximizes benefits for Ontario and Ontarians.

Protection of Intellectual Property

Applicants must implement the proper mechanisms for the protection of intellectual property in accordance with Ontario and Canadian legislation, if applicable, including without limitation the execution of nondisclosure and confidentiality agreements by personnel that are directly involved in the Project.

IP Resources

The Ministry recognizes the important contribution you are making to your field of practice, as well as the potential commercial value that your ideas hold. Strengthening the ways that Ontarians use intellectual property to support the provincial and local economies is a key priority for our government.

In July 2020, the Ontario government announced the province's first [Intellectual Property Action Plan](#), following the recommendations made by the [Expert Panel on Intellectual Property](#).

The IP Action Plan will drive the province's long-term economic competitiveness by prioritizing the generation, protection, and commercialization of IP. We encourage you to familiarize yourself with [Ontario's intellectual property resources](#), as well as those available through the [Canadian Intellectual Property Office \(CIPO\)](#).

1. <https://www.ontario.ca/document/report-intellectual-property-in-ontarios-innovation-ecosystem>

Information Sharing Between CFI and ORF

Before submitting an application to ORF, institutions must complete and submit a "Release of Information" form. Please contact ORFInfrastructure.Mailbox@ontario.ca to obtain this form.

The release form ensures that institutions understand that:

- Applicants will be required to request that CFI release to the Ministry, on a confidential basis, all review material related to the project;
- The proposal review carried out by the CFI will be an important component of the ORF-LIF assessment;
- Ministry staff may attend meetings with expert committees regarding their review of projects;
- It is necessary to streamline and harmonize the ongoing administration and monitoring of successful projects with the CFI;
- The CFI will release to the Ministry, on a confidential basis, ongoing progress and financial information; and,
- Ministry staff may attend financial monitoring/audit visits, as well as site visits to review project progress and impact.

Sharing of information with the Ministry begins immediately.

Ethical, Safety and Integrity Requirements

Institutions must undertake the responsibility to ensure any experimentation will be acceptable on ethical and safety grounds.

- Research involving human subjects or human stem cells must comply with the [Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans – TCPS 2 \(2018\)](#)
- In the case of laboratory animal experimentation, the institution must comply with the guidelines and policies of the [Canadian Council on Animal Care](#).
- Institutions must ensure that any research involving databases containing personal information adheres to ethical and legal requirements relating to privacy, confidentiality and security of the database information.
- Any research involving biohazards must adhere to the standards outlined in the [Public Health Agency of Canada's Laboratory biosafety guidelines](#).
- Research involving radioactive materials must comply with [Canadian Nuclear Safety Commission regulations](#).
- Institutions must ensure compliance with the [Tri-Agency Open Access Policy on Publications](#).

The Ministry expects researchers and participating research institutions to maintain the highest standards of research integrity. Research institutions are expected to have and abide by policies and procedures that govern research integrity.

Equity, Diversity and Inclusion

The Ministry is committed to making equity, diversity and inclusion (EDI) a priority through the integration of EDI principles into ORF-RI funding opportunities.

The Tri-Agency Institutional Programs Secretariat (TIPS), through the Social Sciences and Humanities Research Council (SSHRC), defines equity as the removal of systemic barriers and biases, to enact the practice of say fair and equitable treatment so that all individuals have equal access to and can benefit from the program.

To achieve this, TIPS states that institutions must embrace diversity, defined as differences in race, colour, place of origin, religion, immigrant and newcomer status, ethnic origin, ability, sex, sexual orientation, gender identity, gender expression, and age. Recognizing and valuing diversity and equity must be accompanied by concerted efforts to ensure the inclusion of diverse and underrepresented populations.

The research project should meaningfully engage members of underrepresented groups within the research and development team. Underrepresented groups include, but are not limited to, the five designated groups (women, Indigenous peoples, members of visible minorities, persons with disabilities and members of LGBTQ2+). The institution must strive to put in place the right conditions for each individual to reach their full potential.

Please use the *Creating an Equitable, Diverse and Inclusive Research Environment: A Best Practices Guide for Recruitment, Hiring and Retention* provided by TIPS to determine how best to address areas of improvement in your work environment and to develop equity, diversity and inclusion action plans.

Security Requirements

The Ministry may undertake a review of proposals submitted to the competition to assess potential economic and/or geopolitical risks associated with the project. Results of this review may be shared with members of the strategic review panel(s) and others involved in the adjudication process and may impact funding decisions.

Institutions should assess proposals submitted for funding for potential economic and/or geopolitical risks using existing institutional resources, policies, and processes to help researchers identify and manage economic and geopolitical risks. In addition, consider any potential controversy or negative views that may result from any existing or planned association with all partners, including, private sector partners that may ultimately impact the reputation of Ontario.

Further considerations when assessing potential economic and/or geopolitical risks include:

- Could the results of your research be used to support activities in other countries with ethical standards different from Ontario e.g. such as, internal surveillance and repression?
- Are there any dual-use (both military and non-military) applications to the research being undertaken?
- Is any of the research likely to be subject to Canadian or other countries' export license controls, particularly Ontario's closest trading partners and allies?

Applicants will be required to complete a Mitigating Economic and Geopolitical Risk Checklist, as applicable, as part of the application.

- Additional resources:
 - [Mitigating economic and/or geopolitical risks in sensitive research projects. A tool for university researchers. December 2019.](#)
 - [Geopolitical risk matrix assessment, partnership and best practices checklists developed by the U15.](#)
 - [Safeguarding Your Research Checklist](#)

Award Agreements

Approved applicants will enter into a Grant Agreement with the Ministry. The Grant Agreement stipulates terms and conditions governing the payment of the ORF grant, including, but are not limited to, the following:

- project budget;
- project management;
- communications strategies monitoring and reporting requirements, including annual progress reporting, audits and financial reports;
- milestone and performance measures;
- mode and schedule of payments; and,
- contract termination.

Ownership and Control of Assets Funded by the ORF

Ownership and control of the assets acquired with the grant funds must remain with the institution for a period of five years after acquisition and/or installation in the case of equipment, or five years from the date of occupancy in the case of a building.

In the case of a project with a multi-institutional composition or consortium, the inter- institutional agreement should dictate the arrangements made with regard to the ownership, control and disposal of research equipment and other assets.

Research equipment and other assets must be located at an eligible research institution, unless it can be successfully shown that an alternate location provides the most effective placement of the equipment or other assets. Any change in location requires a notification in writing to the Ministry and may require Ministry approval.

Communications

To ensure continuity, consistency and open communication between the applicant and the ORF-RI, the institution's project officer and the assigned ORF advisor will coordinate all project-related discussions.

Contact Information

If you have questions about the ORF-LIF please contact:

ORFInfrastructure.Mailbox@ontario.ca

Freedom of Information and Protection of Privacy Act (FIPPA)

The Ministry is subject to the *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990 c. F.31, as amended ("FIPPA"). Any information provided to the Ministry in connection with an application to the Ontario Research Fund Program may be subject to disclosure in accordance with the requirements of that Act.

When submitting an application, applicants may wish to consider clearly labelling or otherwise identifying any information being provided to the Ministry under this application that in their view may be considered confidential, commercially sensitive or proprietary information with reference to section 17 of FIPPA.

Applicants are asked not to provide any unsolicited personal information when completing the application form.

Information and documentation provided to the Ministry in the application may be shared with members of ORFAB, Ontario Review Panels, and others for the purposes of administering the ORF-RI program.

Submission Instructions

Submitting Application

Applications for the Ontario Research Fund (ORF) – Large Infrastructure Fund must be submitted to the Ministry by 5pm on July 18, 2022 via your organization's preferred secure cloud storage solution (File Transfer Protocol, drop box, google drive, etc.). The link should be sent to ORFInfrastructure.Mailbox@ontario.ca

You are responsible for ensuring Ministry access to the preferred solution. Ministry staff will access the storage drive and confirm access has been granted. No paper copies are required.

On the application cover letter list the application(s) submitted, title of the project(s) and the name of the Principal Investigator(s). Late or incomplete applications will not be accepted. Any letters of support should be included in the application package, not sent separately to the Ministry.

Electronic Application

- Complete the electronic application form and submit it to the Ministry. Please do not submit scanned copies of a scanned application form as these will not be accepted.
- The application(s) should be signed by the Vice-President of Research or any other officer of the institution with the authority to bind the institution. A digital signature is preferable, however, should this not be possible a scanned signed signature page will be accepted.
- The Ministry requires an electronic copy of the Canada Foundation for Innovation – Innovation Fund application as a separate document accompanying your ORF application.
- The Ministry requires an electronic copy of the Mitigating Economic and Geopolitical Risk Checklist for Ontario Research Fund Applications as a separate document accompanying your ORF application.
- Electronic attachments should be clearly named in the following format:
Institution Name_PI Last Name_Attachment Type.
- Any scanned PDF documents should be done at a lower resolution to minimize the size of the file.

Preparing Application

- Font Type must be Arial and size must be no smaller than 11 pts. Condensed type is not acceptable.
- Attachment text must be in black and of letter quality.
- Please ensure that all pages are numbered.
- Adhere to the restrictions on characters and number of pages.
- The character limit includes spaces.
- Figures, tables and references are not included in the character limit.
- Avoid technical jargon in Project Overview section.
- Avoid long descriptive narrative. Use bullet points or summary tables where possible and appropriate.
- The following three attachments can be included as part of your ORF pdf application form:
 1. Strategic Value Sections (17, 18, 19) in a single document.
 2. Letters of support (if included) should be combined into a single PDF. Do not attach individual support letters separately.
 3. Other figures and tables (if required) related to sections 12 and 13, should be included in a single document.

Appendix A: Application Form Instructions

Numbered instructions below correspond to specific sections of the application form.

1. Proposal Title

In no more than **200 characters**, enter the name of your proposal. Please be concise.

2. CFI File Number

Enter the corresponding CFI file number.

3. Type of Project

Please indicate if your project is one of following:

- Institutional: will involve only one Ontario research institution and eligible to receive infrastructure funds

- Regional: will involve more than one Ontario research institution and eligible to receive infrastructure funds
- National: will involve research institutes outside of Ontario, but within Canada and eligible to receive infrastructure funds

4. Funds Requested from the ORF

It is essential that applicants provide their best forecast of project expenditures in the budget table. The annual budgets provided will form the basis of the annual payment amount that will be determined when the contract is negotiated. Applicants should pay particular attention to whether their timelines are realistic. The decision to allow a grant extension will be viewed in the context of the Ministry's fiscal plan, and is likely to be granted only in very exceptional circumstances. Projects should not assume that extensions will be granted.

Table 1: Please describe the funding requests from the Ministry, CFI and total for projects within Ontario. The first table only describes the funding request to Ontario.

Table 2: Please describe the total project costs if the project also involves research institutes outside of Ontario. Please indicate the Province, Institute and Project Lead for projects being led outside of Ontario. For multi-institutional projects with distributed infrastructure across Canada or infrastructure sited outside of the province, the lead Ontario institution should submit an ORF application for the Ontario component of the project. The institution should also ensure that out-of-province partners submit funding applications to their respective governments for their components of the project.

5. Lead Institution

Name the lead institution taking legal responsibility for the project. If multiple institutions submit a joint application, one institution must be assigned as the Lead Applicant.

6. Principal Investigator

Identify the Principal Investigator (PI) and complete the two questions.

- Does the Principle Investigator currently hold any position or role, whether paid or voluntary at any foreign government, foreign academic or research institutions, Canadian military/defense entity, foreign military/defense entity, private enterprise and/or community organizations?
- Has the Principal Investigator received or is expected to receive funding for this project from foreign government, foreign academic or research institutions, Canadian military/defense entity, foreign military/defense entity, and/or private enterprise?

7. Collaborating Institutions

A collaborating institution is one that receives part of the infrastructure or uses part of its institutional envelope in a multi-institutional project.

8. Advanced Research Computing Infrastructure

Please indicate if your request includes funding for Advanced Research Computing Infrastructure as defined in the Canada Foundation for Innovation - Innovation Fund guidelines.

9. Canadian Research and Development Classification (CRDC)

The three classifications in the Canadian Research and Development Classification (CRDC) are:

- 1) Type of Activity (TOA);
- 2) Fields of Research (FOR); and
- 3) Socio-economic Objective (SEO).

When completing your application form, please refer to the CRDC guidelines and classification codes. See Appendix B.

10. Key Words

List up to 10 key words that specifically describe the project.

Project Overview

11. Infrastructure Project Brief

Using simple, concise sentences describe in no more than **300 characters**, the objective and key elements of this proposal.

Please Note: This project brief may be used in whole or in part in news releases or similar material, if the project is approved.

12. Infrastructure Project Overview

In no more than **6,500 characters** and in **non-scientific terms**, describe the research/technology development to be carried out, the major equipment to be purchased, principal area(s) of research to be enabled by the infrastructure, the area of application of the research and how the facility and the research/technology development will benefit Ontario.

13. Linkages to Other Awards

Where applicable, and **no more than 4,000 characters**, describe how this initiative builds on or complements research or technology development funded through previous Ontario investments (such as Ontario Research Fund – Research Infrastructure or Research Excellence awards, etc.).

14. Highly Qualified Personnel

Please indicate the projected number of HQP by category that will be trained as a result of the proposed project. The numbers are limited to the timeframe of the research proposal.

15. Intellectual Property

In **no more than 4,000 characters**, describe how the IP generated from the project will be determined, if relevant.

16. Intellectual Property Training

List (if any) IP training the research team has undertaken recently either through their respective institution or through [Ontario's intellectual property resources](#) and the [Canadian Intellectual Property Office \(CIPO\)](#).

Strategic Value

Please attach your Strategic Value response (17, 18, and 19) to Section 21.

Applications are required to describe the potential research impact and anticipated value of their research in each of two categories: economic benefits and societal benefits.

In addition, applications must address the Plan for Achieving Impact and End-User Engagement to maximize the likelihood of realizing these benefits. To that end, applicants are strongly encouraged to begin engagement with partners as early as possible.

A total of **no more than 50,000 characters** are permitted for the Strategic Value section. Each of the two benefit types—economic benefits and societal benefits—must be addressed, but applicants may allocate character counts as appropriate to the proposed project. In all cases, impacts may be short- or long-term.

It is strongly recommended that applicants consult their institution's industry liaison office, knowledge mobilization unit, or equivalent as well as their external partners in the completion of this section. Demonstrate this engagement where appropriate.

17. Economic Benefits

Economic Impacts

Describe the economic potential of your research and when it could be achieved. Describe how your research, where applicable, will contribute to economic outcomes including—but not limited to—improved productivity, job creation, development of human capital, sustainable use of natural resources, regional development, improved public and private sector efficiency, trade growth, improvements to Ontario’s international reputation as an innovation hub, and expanded access to valuable data assets.

Demonstrate how the economic benefit of the proposal extends beyond the private sector partners and beyond traditional IP and commercialization agreements.

This section should provide supporting analysis of the economic areas being discussed, including sources of information. Please note that your market analysis can be qualitative, but quantitative information will strengthen the application.

If applicable, describe the commercialization potential of your research, when it could be achieved and the anticipated benefits to Ontario. Describe how your research would contribute to commercialization outcomes such as spin-off companies, patents, licenses, and other forms of knowledge transfer to industry. Describe the technology (product or process) that would be developed from this IP and explain how potential customers would use this invention.

This section should provide a brief market analysis, including sources of information. Please note that your market analysis can be qualitative, but quantitative information will strengthen the application.

18. Societal Benefits

Societal Impacts

Describe the potential of your research to achieve societal benefits and when they could be achieved. Describe how your research will contribute to societal outcomes including - but not limited to - positive effects on human health, environmental wellbeing, poverty reduction, education, quality of life, public policy, and profound shift in understanding of a given discipline.

This section should provide supporting analysis of the societal areas being discussed, including sources of information. Please note that your analysis can be qualitative, but quantitative information would strengthen the application.

19. Plan For Achieving Impact and End-User Engagement

Plan For Achieving Impact and End-User Engagement

Describe the strategy for realizing the potential of the research, and for providing practical application and benefit to industry, the economy, and to wellbeing in Ontario in the short- and long-term. Describe the steps that will be and/or have already been undertaken to maximize the likelihood of achieving the Research Impacts discussed above.

As appropriate, identify the roles and responsibilities of members of the project team involved in realizing the Research Impacts. Describe the previous experience of the project team in appropriate types of knowledge transfer. Explain the roles of your industry and community partners, institutional liaison offices or other experienced advisors involved in the translation of your research. Applicants are encouraged to consider inter-institutional partnerships to maximize translation, such as partnerships between universities and Colleges of Applied Arts and Technology.

Describe the engagement that you will and/or have already undertaken with potential recipients of your research. This may include, but is not limited to, private sector partners, industry associations, consortia, governments, other researchers, the broader public sector, non-profit groups, community/patient groups, and philanthropic organizations. Describe the strategic alliances, partnerships, or licensing agreements you have, or plan to have, in place with these recipients.

Where appropriate please attach any End-User letters of support in Section 21.

Describe the vested interest of your partners in the research and how they demonstrate meaningful commitment through financial contribution to the project and/or evidence of practical interest in the research outcomes.

20. Mitigating Economic and Geopolitical Risk Checklist

For your proposed project, please complete the [Form](#) and submit as a separate document accompanying your ORF application.

21. Attachments

Attachments

- The Ministry will accept the following three attachments as part of your ORF pdf application form.
 1. **Strategic Value:** Please attach your Strategic Value response (17, 18 and 19) here. All three sections should be submitted in a single document.
 2. **Support Letters:** Support letters can be included as attachments, but are not mandatory. Please submit all letters of support as a single PDF document.
 3. **Figures and/or Tables:** If required, please attached figures and tables for sections 12 and 13 and in a single document.
- The following documents must be submitted as separate attachments accompanying your ORF application:
 1. An electronic copy of the Canada Foundation for Innovation – Innovation Fund application.
 2. An electronic copy of the [Mitigating Economic and Geopolitical Risk Checklist](#) for Ontario Research Fund application.

22. Freedom of Information and Protection of Privacy Act (FIPPA)

The Ministry is subject to the [Freedom of Information and Protection of Privacy Act](#), R.S.O. 1990 c. F.31, as amended (“FIPPA”). Any information provided to the Ministry in an application to the Ontario Research Fund Program may be subject to disclosure in accordance with the requirements of that Act or other laws.

23. Confirmations

The application(s) should be signed by the Vice-President of Research or any other officer of the institutions with the authority to bind the institution.

24. Signature

For the signature, we accept e-signatures if you have the functionality to do so. If not, we ask you print the signature page, sign and date, scan and return the page with the complete application package via email to ORFInfrastructure.Mailbox@ontario.ca

Appendix B: Canadian Research and Development Classification (CRDC)

The Ministry has implemented the Canadian Research and Development Classification (CRDC), a system that provides a common approach to classifying research across institutions and governments. It was published by Statistics Canada on October 5, 2020.

The CRDC was developed through a collaborative effort by the Canada Foundation for Innovation (CFI), the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), the Social Sciences and Humanities Research Council of Canada (SSHRC) and Statistics Canada.

The CRDC includes all current sectors of research in Canada and supports a wide range of needs within the research and development ecosystem. It is modelled after the Australian and New Zealand Standard Research Classification and Frascati Model 2015 (from the Organization for Economic Cooperation and Development) and aligns with international standards.

The three classifications in the Canadian Research and Development Classification (CRDC) are:

- 1) Type of Activity (TOA);
- 2) Fields of Research (FOR); and
- 3) Socio-economic Objective (SEO).

When completing your application form, please refer to the CRDC guidelines and classification codes, available for download in HTML, CSV, and PDF formats:

- English: <https://www.statcan.gc.ca/eng/subjects/standard/crdc/2020v1/index>
- French: <https://www.statcan.gc.ca/fra/sujets/norme/ccrd/2020v1/indice>

Guidelines for classifying with the CRDC

1. Classifying by type of activity (TOA)

This way of classifying research refers to whether it is basic research, applied research or experimental development.

- The research project should be allocated to a single TOR (basic research, applied research or experimental development). TOA Codes can be found online using the links noted above. You must provide the alphanumeric code as well as the title/ name of the TOA in the fields provide on the application form.

Example:

Code: RDT2 Division: Applied research

2. Classifying by field of research (FOR)

This way of classifying research includes major classes and related subclasses of research based on disciplines, knowledge sources, objects of interest, methods, processes, and techniques used in research and development activity. This is different from socioeconomic objectives, which refer to the purpose or outcome of the research and development activity.

- The research project should be allocated to a single FOR (major class and related subclass). FOR Codes can be found online using the links noted above.
- You must provide the alphanumeric code as well as the title/name of the FOR in the fields provide on the application form.

Example:

Level 1 Code: RDF10 Division: Natural Sciences

Level 2 Code: RDF104 Group: Chemical sciences

Level 3 Code: RDF10404 Class: Macromolecular and materials chemistry

Level 4 Code (optional): RDF1040401 Subclass (Field): Characterization of materials

3. Classifying by socioeconomic objective (SEO)

This way of classifying research refers to the intended purpose or outcome of the research and development activity. This is different from fields of research, which refer to the disciplines, knowledge sources, objects of interest, methods, processes, and techniques used in the research and development activity in order to achieve objectives.

- The research project should be allocated to a single SEO (major class and related subclass). SEO Codes can be found online using the links noted above.
- You must provide the alphanumeric code as well as the title/name of the SEO in the fields provide on the application form.