Ontario Research Fund - Research Excellence Round 6 Application Instructions

FUNDING APPLICATION

Applicants requesting project funding must follow the outline below. For further details and assessment criteria, please check the ORF-RE Program Guidelines.

PROJECT PROPOSAL COPIES

- Submit four copies of the completed Application Form (the original plus three copies).
- **The original must be signed by the Vice-President of Research or any other officer of the institution with authority to bind the institution.**
- Original application should not be bound or stapled.
- Provide a complete electronic copy on a CD-ROM, in the MS Word format and associated spreadsheet template forms (provided by the Ministry). Please try as much as possible to keep your electronic version in one document or clearly mark in which order the file should be printed in order to maintain the order of your original application. It is possible that the expert reviewers will see the electronic version of your application only.

GENERAL FORMAT

- The application should be printed, single sided, on 8 1/2” x 11” white paper.
- Print must be in black and of letter quality.
- Text must be single-spaced, with no more than six lines per inch.
- Type size must be no smaller than 10 pts.
- Condensed type is not acceptable.
- Please ensure that all pages are numbered.

PREPARING APPLICATIONS

- In preparing the application, where indicated, use the template tables provided as attachments.
- Please adhere to the restrictions on the amount of information provided in the relevant sections of the Application Form.
- Please avoid technical jargon in abstracts and milestones.
- Avoid long descriptive narrative. Use bullet points or summary tables where possible.

SUBMITTING APPLICATIONS

All completed applications must be received by the Ministry and/or postmarked no later than January 27, 2012. **Late and incomplete applications will not be accepted.**

- Electronic applications will not be accepted as placeholders for late or pending original paper applications.
- Faxes and/or email attachments will not be accepted in place of the originals.
- Applications and supporting documents (including the institutional letters of support for the application) must be addressed and sent to:

  Allison Barr, Director, Research Branch

http://www.mri.gov.on.ca/english/programs/orf/re/applicationInstructions.asp
Communications

To ensure continuity, consistency and open communication between the applicant and the ORF, all inquiries/discussions during the application, review and post-award processes are to be coordinated by the lead institution's named contact and the assigned Research Branch staff.

Applicants needing additional information or clarification regarding the application to the Fund may contact:

Application and adjudication:
Mima Vulovic, 416-212-7060, mima.vulovic@ontario.ca
Lyn Doering, 416-326-1343, lyn.doering@ontario.ca

Post-award and contracting:
Jack Krepel, 416-326-9603, jack.krepel@ontario.ca

ORF-RE Round 6
Application Instructions

General Information

1. Proposal Title
Enter the name of your proposal. Please be concise.

2a. Amount Requested
Please indicate the dollar value of the requested ORF-RE grant.

As a general rule, the minimum support provided by the ORF-RE to a project is $1 million and the maximum support provided to a project is $4 million. Only in exceptional circumstances will requests over $4 million be considered.

2b. Expected Project Start Date
The "Start-date" for the project is generally the date of the Award Notification Letter or later. In exceptional circumstances the Ministry may negotiate an earlier "Start-date". If an earlier "Start-date" is allowed it will not be any earlier than the date of the call for proposals for that round of competition. For ORF-RE Round 6, this date is August 11, 2011.

3. Lead Institution
Name the lead institution taking legal responsibility for the project. (Important: if institutions submit a joint application, one institution must be assigned as a Lead Applicant.)

4a. Lead Institution Contact:
Provide the following information for the applicant contact associated with the lead institution.

- Name
- Title
- Institution
- Department
- Courier Address
- Telephone
- Fax
- E-mail address.

4b Principal Investigator:

Provide the following information for the principal investigator.

- Name
- Title
- Institution
- Department
- Courier Address
- Telephone
- Fax
- E-mail address
- Number of co-investigators (not including the Principal Investigator).

5. Research Focus of Project

Check only the most applicable area of focus or, if not applicable, specify the focus of your research. Please list codes for your research discipline and area of application, as per the CFI list available on the website. Also, please specify your narrow discipline.

6. Collaborating Institution(s)

If applicable, please name other institution(s) that will be collaborating in the project.

7a. Private Sector Partner(s)

Please name private sector partner(s) involved in the project.

7b. Researchers’ Interest in Private Sector Partners

Indicate if any researcher involved in the project has any interest in any of the private sector partners named in the proposal. Describe the relationship between the researcher and the private sector partner (refer to the program guidelines for additional information).

QUALITY OF RESEARCH

8. Proposal Descriptions

a. Proposal Brief (Maximum length – three lines): Describe in no more than three lines, using non-technical and concise language, the objective and key elements of this proposal, as well as its strategic value to Ontario.

b. Proposal Abstract (Maximum length – 500 words): Provide a proposal abstract of no more
than 500 words, using non-technical language. Please do not include images and/or charts in this summary.

**Please note:** The summary descriptions (Brief and/or Abstract) may be used, in whole or in part, in Press Releases or similar material, if the project is approved.

c. **Proposal Description (Maximum length – 15 pages for ORF requests up to $4 million; 25 pages for requests exceeding $4 million.)** A detailed, but concise description of the proposed research project should be included in the application. *(Important: The references and/or charts, which can be added to the Proposal Description, are not included in the maximum length restrictions.)*

Describe your research plan and methodology within the context of current advances in your discipline. Explain why you think your research is leading edge, i.e. how your research goals, theory and hypothesis contribute to your field from a national and/or international perspective. If applicable, describe unique features of your scientific environment and how these may contribute to the probability of success *(Important: Refer to the ORF Research Excellence Guidelines for assessment criteria.)*

d. **Proposed Innovation: (Maximum length – 1 page for requests up to $4 million; 2 pages for requests exceeding $4 million)** Describe what is new, what is different, what is better, and what is significant about your proposed research.

Describe what is novel and different about the proposed project compared to the state of the art research in the field. Provide a description of the relevance of the research proposed both within the national/international context and if applicable within the context of previous Ontario government funding or ongoing Ontario research initiatives.

e. **Proposal Integration: (Maximum length – 1 page for requests up to $4 million; 2 pages for requests exceeding $4 million)** For proposals that include multiple sub-projects and/or multiple research topics, describe how you plan on integrating the projects/topics. Explain how/ why the various parts of the project are relevant and necessary to the project as a whole.

9. **Research Collaboration**

If applicable, describe the nature and level of inter-institutional and/or international research collaboration in your project.

10. **Principal Investigator and Co-investigator(s)**

Identify the Principal Investigator (PI) and each co-investigator (including their title, department and institution) and briefly describe his/her relevant qualifications as well as his/her individual potential to make significant contributions your research objectives. (A maximum 1/2 page per each investigator). Please make sure that the number of co-investigators in this section corresponds to the number in section 4b.

For each investigator, please attach a CV (maximum 3 pages) to the application, highlighting his/her recent research contribution, including:

* other research support currently held or applied for
training of highly qualified personnel, i.e., training of undergraduate students and technical/professional assistants
other achievements (peer-reviewed publications, patents, significant presentations, awards, honours, membership on committees etc.)

The proposal should indicate the percentage of each investigator’s time on a proposed project. This percentage should also be reflected in the budget. Identify whether a co-investigator is also working on another project submitted to or currently being funded by the ORF-RE program (indicate the project’s name and lead institution) and specify the distribution of the investigator’s involvement, should all projects be approved for funding.

11. External Expert Review

Please provide the names and contact information of three experts who could provide scientific review of your application. The suggested experts should not have a conflict of interest (CoI) with the proposal or any of the researchers associated with the proposal. (Please see CoI Policy for Expert Reviewers). In this section, you may also provide up to two names of experts you do NOT want to have provide a scientific review of your application.

Please note: The Ministry reserves the right to choose reviewers and may choose reviewers other than those suggested by the applicant.

If your application, or components of it, have already been peer reviewed (e.g. Canadian Institutes of Health Research [CIHR], Natural Sciences and Engineering Research Council [NSERC] or Social Sciences and Humanities Research Council [SSHRC] reviews), please provide a copy of the review or the authorization to access it. Similarly, if the principal researcher(s) associated with a proposal have a record of successful applications with other granting agencies, information regarding this record should be provided.

STRATEGIC VALUE FOR ONTARIO

12. Strategic Value

Please demonstrate the strategic value of your research to Ontario (eg. how it provides strategic value in terms of new knowledge, industrial application or potential for economic benefit; how the research will impact society, health, the environment, quality of life or public policy; how its results will strengthen Ontario's economy and/or enhance the province's profile in the global scientific community).

The information provided may be shared with other Ontario ministries, agencies and government-funded not-for-profit corporations for the purpose of strategic value assessment.

13. Anticipated Impact in Focus Areas

If applicable, please indicate how the goals of your research may contribute to knowledge transfer and/or impact on the following Round 6 focus areas:

- Bio-economy and clean technologies;
- Advanced health technologies;
- Digital media and information & communications technologies; and
- Sustainable communities.

COMMERCIALIZATION FOR THE BENEFIT OF ONTARIO
In addition to excellent science, the Research Excellence program requires evidence of your project’s commercialization potential (long-term and, if applicable, short-term). In completing the Commercialization section of the application form, it is recommended that you consult your institution’s industry liaison office or equivalent and/or your private sector partners (Maximum length – 5 to 10 pages for sections 14-17).

### 14. Commercialization Implementation Plan

Describe the long and/or short-term commercialization potential of your research and when you expect it to be achieved. In the outline of your commercialization pathway, please address the following areas:

- **Expected outcomes**: identification of financial, social, environmental and/or ethical goals
- **Knowledge transfer**: address potential for knowledge transfer to industry
- **Market**: provide a brief market analysis (please include the sources of your information). Indicate who is interested in the outcome of your research. Please note that your market analysis can be qualitative, but it should also include some quantitative information
- **Strategic alliances**, partnerships, or licensing agreements you have, or plan to have, in place
- **Relevant industry and/or community partners** and how you plan to work together
- **Vested interest** of your private sector partners in the research (*Important*: meaningful private sector commitment is demonstrated through financial private sector contribution to the project and/or evidence of practical interest in the research outcomes.)
- **Intellectual Property (IP)**: (*Important*: This is in addition to the protection and disposition, required in Section 17.)
  - Describe the technology (product or process) that would be developed from this IP and explain how potential customers would actually use this invention
  - Explain how your project could improve the value of the IP rights, and enhance current/future patent or copyright protection

### 15. Commercialization Management Plan

Please outline your commercialization management plan.

- Identify who is involved in assessing, planning and guiding the commercial and IP aspects of the project. Provide evidence of relevant commercial experience
- State the level of experience of the research team (PIs) with IP and commercialization
- Explain the roles of your industry partners, industry liaison office or other commercially experienced advisors involved in the commercial or IP tracking and actions and outline accountability and reporting mechanisms

### 16. Commercialization Financial Strategy

Outline your financial plan for commercializing your research. Briefly describe the necessary financing you will require to fully complete it. If applicable, please list your financial backers/funders and describe how your currently available funding may contribute to realization of your commercialization plan. Explain the assumptions on which the projections are based.

### 17. Intellectual Property (IP)

Demonstrate how the economic benefit of the proposal extends beyond the private sector partners. Describe how ownership of the project’s IP will be determined, in accordance with the lead
institution’s 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.)

Please refer to the ORF Research Excellence Guidelines on IP.

**Important:** If applicable, please state who assisted you in completing the Commercialization section of the ORF-RE Application Form (e.g. your institutions’ industry liaison/tech transfer office, private sector partner(s), or mentor, etc.)

**DEVELOPMENT OF RESEARCH TALENT**

**18. HQP Development Plan**

Briefly outline your plan for the training and development of the highly qualified personnel (HQP). Identify the expected impact that this training may have on academe and/or industry. Describe how the meaningful engagement of the HQP is germane to the project. Please ensure that the anticipated number of HQPs is consistent with your proposal budget. Where possible, include examples of "experiential learning1":

Please indicate the total number of HQP you plan on training over the life of the project.

**PROJECT MANAGEMENT**

**19. Project Management**

Applications must clearly outline how the project will be managed.

- Identify the role and function of the project manager and other key project management staff.
- Provide a resume of the project manager (if known at the time of application).
- Describe the proposed governance structure to manage the project (e.g. Academic Committee, Board of Directors, with a Manager or Executive Director). The governance structure should not include Ontario government participation.

Proposals must also outline how research capacity will be sustained after completion of the project. (**Important:** Ensure the proposed governance structure is commensurate with the size, scope and complexity of the proposed project.)

**MILESTONES AND DELIVERABLES**

**20. Milestones and Deliverables:**

Please list major milestones, measurable deliverables and the expected project year of completion related to outlined aspects of your project (e.g. project management; capacity building, research, etc.) These will be used to monitor and determine the project’s progress against a specific project work plan from the date of ORF Research Excellence funding to the point at which the project is fully implemented. (If necessary, please insert additional rows).

1. **Management Milestones:** List significant milestones and deliverables related to project management – i.e. hiring a project manager, establishing a management board and/or external advisory committee etc. Provide measurable timelines when these milestones will be delivered – i.e. milestone: hire a project manager; deliverable: year 1.

2. **Research Capacity Building Milestones:** List capacity building milestones – i.e. hiring, training, retaining HQP. List specific detail as to type of HQP – i.e. PDF, Grad Student, new faculty etc. Provide measurable numbers for each category, as appropriate, with corresponding deliverable timelines – i.e. Hire 2 PDFs; deliverable: year 1.
3. **Research Milestones:** List significant measurable milestones, and/or outcomes of research activities and provide the deliverable timeline. Do not just list research activities – i.e. will do research in “astroparticle physics”. Provide a milestone(s) that will be the outcome of such an activity – i.e. visualization and measurement of “dark-matter” – deliverable: year 3. In projects that have sub-projects, list milestones in chronological order under their respective sub-project. Brief impact statements should be provided for relevant milestones or clusters of related milestones. See Definitions below for more information and/or examples.

4. **Commercialization Milestones** (May not be relevant for “Strategic Value” proposals):

Commercialization milestones should relate to specific research milestones – i.e. a research activity that will yield a milestone that has commercial potential – i.e. Research milestone: visualize dark-matter; Commercialization milestone: Teleportation portal developed employing dark-matter physics that will be commercialized by private sector partner (PSP) X Inc. The link of these milestones to a relevant PSP provides a measurable impact. Brief impact statements should be provided for relevant milestones or clusters of related milestones. See Definitions below for more information and/or examples.

5. **Other Milestones:** List milestones that relate to hosting or attending symposia, workshops, conferences etc. Provide numbers for each and timelines that allow for measurement in the annual progress report. Provide potential numbers of publications and/or citations that may be expected from research milestones and provide the deliverable timeline – i.e. X number of publication in year 1, 2, 3 etc. If external funding, grants etc. are to be applied for during the life of the project, provide the name of the agency – i.e. NSERC etc., and the timelines for expected decisions. Success or failure to receive such external funds should be reported in the relevant reporting years. List milestones that relate to the sustainability of the research beyond the funding window of ORF – i.e. external grants to sustain the research, added PSPs etc., and provide the deliverable timelines.

6. **Youth Outreach Milestones:** List measurable youth outreach milestones that clearly demonstrate the involvement of youth (especially high school students) with the project. Provide measurable numbers – i.e. number of students, schools, teachers etc. and the deliverable timelines – i.e. year 1, 3 etc.

**Main impact areas to consider when building milestones and reporting in the APR:**

- Impact on advancing the science, discipline or current state of knowledge in the field of study.
- Impact on the institution’s research capacity building. Will it attract, train and retain highly qualified personnel?
- Impact on the private sector partners to the project. Does it create a commercialization path/potential?
- Impact on Ontario. Will it create jobs? Will it “brand” Ontario as a leading jurisdiction for conducting research in the discipline/focus/area? How else will it impact on the economy of Ontario?

**Definitions:**

**Milestone**

- A significant expected event or accomplishment in the life of the project resulting from research activities.
- A point at which an important change or resolution occurs, decision point.

**Deliverable**
• The achievement of a milestone within a prescribed timeline – i.e. in year 1, 2, 3 etc.

Impact
• The effect of achieving a given milestone, especially research milestone will have on the main areas listed below. Impacts, as part of the milestones and deliverables need only be a brief and succinct statement. Not every milestone will have an impact but a related cluster may. Impacts will need to be more fully detailed when presented in the discussion in the annual progress report (APR).

FUNDING SOURCES

21. Funding Sources
In the table provided in the Application Workbook, outline funding sources for your project. Please note that all contributions are to be further detailed in the Budget Breakdown Form and private sector in-kind contributions are to be further detailed in the Private Sector Partner Form. Please note that Application Workbook consists of three separate Excel forms.

Please fully disclose the funding sources (i.e federal government grants, etc), timelines and amounts for any ongoing and anticipated funding pertaining to research that may overlap with the proposed project.

Detailed Budget Form:
A budget for the proposed project must be prepared using the Excel spreadsheet provided on the website. Please provide a detailed explanation and justification for each budget item. Provide sufficient information to allow reviewers to assess whether the resources requested are appropriate for the execution of your project.
For Salaries and Benefits section, please provide the following detail:
• names of individuals involved in your project (if known)
• the portion of their time (%) expected to be spent on the project
• their function or activities in the project and explain the need for that function in the project.

For training of HQP (highly qualified personnel), provide details of program or training activities. Administrative salaries should be included in the "Management Administration category" of the budget form.
(Important: Refer to the ORF Research Excellence Guidelines for further information on Budget requirements.)

Private Sector Partner Form:
A Private Sector Partner Form spreadsheet is provided on the ORF-RE website. Please use the spreadsheet to list your private sector partners as well as their cash and in-kind contributions.
(Important: Refer to the ORF Research Excellence Guidelines for lists of eligible private sector partners and partner contributions.)

CONDITIONS OF FUNDING

22. Youth Outreach Plan
A defined Youth Science and Technology Outreach Plan is a condition for the ORF Research
Excellence funding. All applications must include a plan for annual youth outreach activities primarily targeted at high-school students. The applicants may use up to 1% of the ORF portion of funding for related activities. (Important: Refer to the ORF Research Excellence Guidelines on Youth Science and Technology Outreach).

**Letters of Support**

**Institutional Letter of Support:** Each application must be accompanied by a Letter of Support from the lead institution, indicating whether the goals of the proposed research are consistent with the institution’s overarching research strategy. The letter must be signed by the Vice-President of Research or any other officer of the institution with authority to bind the institution. In case of applications involving more than one institution, the letter should also contain the appropriate co-applicants’ signature(s).

**Private Sector Partners’ Letters of Support:** Each project private sector partner must provide a signed letter on appropriate letterhead stating their vested interest in the project and the dollar amount of their cash and in-kind contributions. The letters must confirm the direct support as well as the date of contribution (Important: Refer to the ORF Research Excellence Guidelines for the dates of eligibility of contributions and expenses). If applicable, private sector partners should also indicate the level of their assistance to the applicant’s Commercialization segment of the application form.

Footnote 1: Examples of experiential learning include but are not restricted to: thesis/project topics derived from a company problem; soft skills training; first job/internships; entrepreneurship training; collaborative research; and/or coop placements.