

Call for Research and Innovation Projects in the Field of Advanced Materials – R16

Application deadline: May 25, 2018

Objectives

This call for projects seeks to support innovation in the field of advanced materials by funding research projects designed to accelerate the development of advanced materials as a practical response to some of Québec's major industrial challenges. It has been developed to help establish collaborations between industry and the research sector (universities, CCTT or public research centres).

With a financial envelope of several million dollars, this call for projects involves two types of funding applications according to the project's technology readiness level (TRL¹):

- Application for funding a project with a TRL of 1 to 3 at the early stage and involving at least two independent companies, one of which is established in Québec where it carries out its in-house or R&D activities, as well as at least one university or CCTT.
- Application for funding a project with a TRL of 4 to 6 at the early stage and involving at least one company, which is established in Québec where it carries out its in-house production or R&D activities, as well as at least one university, CCTT or public research centre.

Procedure and schedule

Candidates must submit a COMPLETE APPLICATION before midnight, May 25, 2018. Results will be announced no later than the end of September 2018.

Recommended themes

In keeping with its strategic plan, PRIMA QUÉBEC recommends the submission of files dealing with the development of advanced materials applied to such key Québec sectors as transportation and infrastructure, energy, the environment, electronics, health and chemistry.

Technologies targeted by this call for projects include primarily:

- **Innovative materials**
Polymers, rubbers, biomaterials, metal, innovative fillers (micro/nanoparticles), cellulosic filaments, natural and recycled fibres, nanomaterials, etc.
- **Formulation of new materials and high performance end-products**
Composites (TD or TP), elastomers, alloys, ceramics, smart textiles, flexible materials, membranes, thin films, coatings, biocompatible materials, encapsulation, etc.
- **Development of scale-up processes and new characterization instrumentation**
Additive manufacturing and 3D printing, surface modification and surface treatment, micro/nanofabrication, new equipment for material characterization, modelling and simulation, etc.

¹ Definitions of different technology readiness levels (TRL) are recapped in Appendix A of this document.

Eligible candidates

Applications must be submitted by Québec research establishments (universities, CCTT or public research centres) and must allow the training of highly qualified personnel (HQP). All industrial and academic organizations or public research centres participating in a project **are required to be members of PRIMA QUÉBEC at the time the project is submitted** and must remain members throughout the duration of the project.

To become a member of PRIMA QUÉBEC: <http://www.prima.ca/en/become-member>.

Financing Program Standards

TRL	1 to 3	4 to 6
<u>Minimum</u> number of industrial partners	2 including at least 1 in Québec	1 in Québec
Eligibility of industrial partners from outside Québec	Yes, as a 2 nd company	Yes, as a 2 nd company
<u>Minimum</u> number of Québec academic partners (university or CCTT or public research centres)	1	1
Eligibility of public research centres alone	NO The public research centre must collaborate with a university or CCTT	YES provided the project involves the training of HQP
PRIMA QUÉBEC financing maximum, in %, of eligible R&D costs	40%	20%
Minimum industrial financing	20% <u>in cash</u> The cash contribution of any of the partners <u>cannot exceed 80% of the total industrial contribution.</u>	40% including <u>maximum 20% in-kind</u>
Maximum cumulative public financing	80%	
Complementary financing encouraged	NSERC (CRD, ARD, Canadian research chairs, industrial chairs, etc.), NRC-IRAP, MITACS, other municipal, provincial or federal sources of financing.	
Maximum duration of projects	3 years	3 years
Maximum PRIMA QUÉBEC financing in \$ per project	\$1,5 M (\$500 K/year)	\$1,5 M (\$500 K/year)

Eligible expenses

Eligible expenses are the direct costs of projects (research mandate) incurred by Québec public research establishments. The salaries of university researchers already paid by their institution or an organization subsidized by a government organization are not eligible.

Indirect research expenses

In addition to the research grant, for all funded projects, PRIMA QUÉBEC will give the university a subsidy for indirect costs amounting to a maximum of 27% of the subsidy granted by PRIMA QUÉBEC on the following expense items: wages and pays, students' scholarship, equipment and consumables.

PRIMA QUÉBEC management costs

On TRL1-3 projects, industrialists involved in the project must contribute to PRIMA QUÉBEC's management costs a total of 2.4% of the amount of research mandate.

On TRL 4-6 projects, industrialists involved in the project must contribute to PRIMA QUÉBEC's management costs a total of 1.2% of the amount of research mandate.

Intellectual property management

An agreement governing conditions for the management of intellectual property must be concluded among all partners (companies, universities, research centres) before financing is awarded.

Application files will be accepted for evaluation even if an intellectual property agreement is not available at the time the proposal is submitted. Nonetheless, the application file must present a broad outline of the sharing of intellectual property under consideration.

Evaluation criteria

For each of the "TRL 1-3" and "TRL 4-6" facets, files will be selected by an independent jury based on the following criteria and in the proportions shown:

TRL 1-3 projects:

- Project's scientific quality and feasibility (30%)
- Excellence of the research partnership (40%)
- Degree of innovation and training of HQP as well as the project's spinoffs in the midterm (30%)

TRL 4-6 projects:

- Project's technical quality and feasibility (30%)
- Quality of the plan for the transfer of knowledge, training and industrial applications (30%)
- The project's degree of innovation anticipated competitive advantages as well as its socioeconomic spinoffs (40%)

Projects scored under 70% will not be eligible for financing.

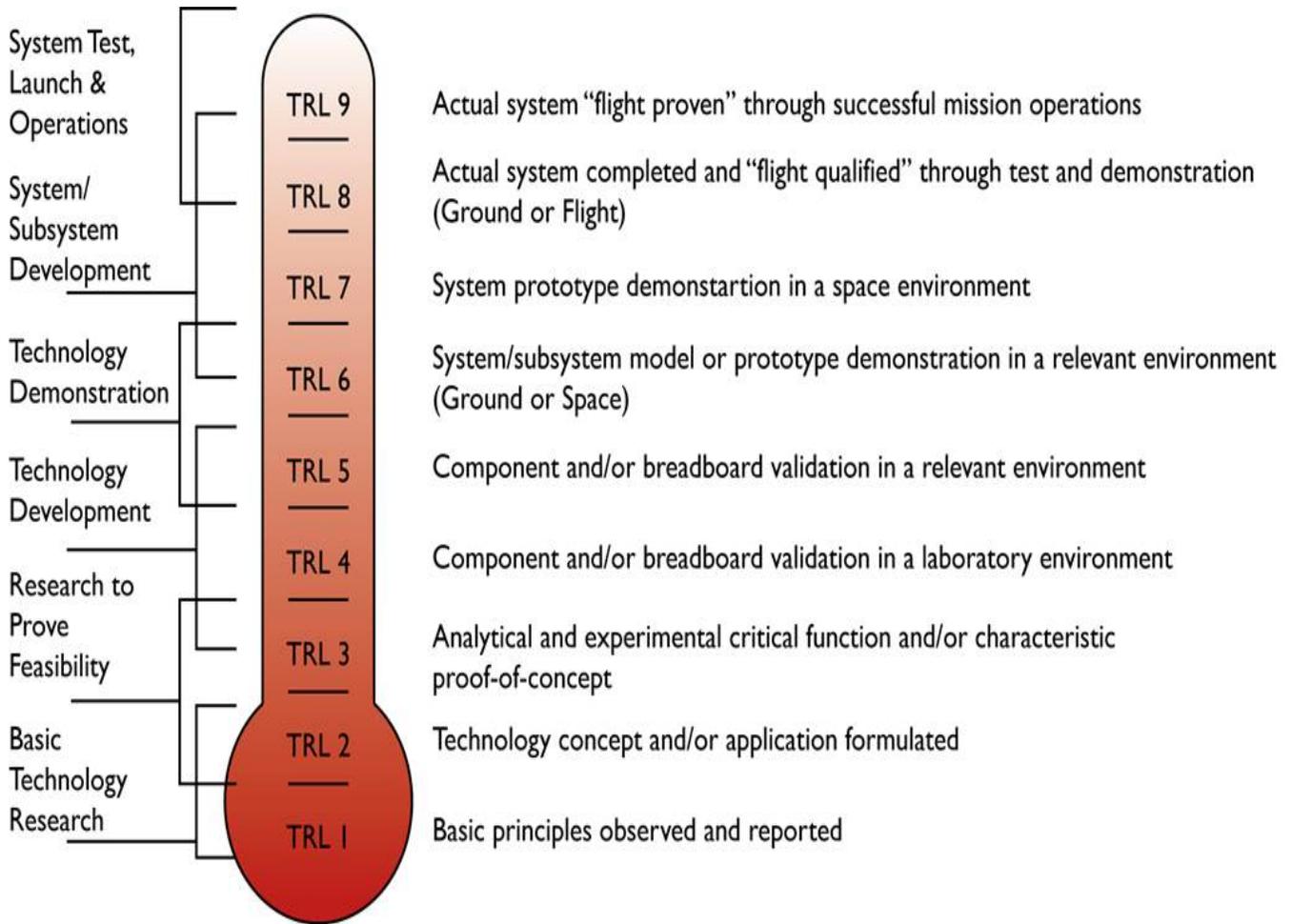
Contact person

For additional information or help with the drafting of the application file, contact Sylvie Dufort, at 514 284-0211, ext. 228. Application files must be submitted in 1 file in PDF format (Adobe Acrobat) by email to:

sylvie.dufort@prima.ca.

APPENDIX A

Definition of different technology readiness levels (TRL)



Graphic inspired by the document: Space Systems - Definition of Technology Readiness Levels (TRL) and their criteria of assessment, ISO 16290.

The ISO16290 standard is available for consultation at the offices of PRIMA QUÉBEC.