Mitacs Accelerate International – Writing your Proposal

Who is the audience?

Your proposal will be reviewed by at least two external experts in the field(s) covered in the application. These reviewers will be active researchers who have been chosen to review your proposal because they are well qualified to make a judgment on the quality of the proposed research project. Therefore, you want to provide sufficient detail in your proposal to adequately convey to the reviewers that you have thought about this project and that you have the knowledge to carry it out. As the proposal writer, it is your task to clearly make the case for the value and feasibility of your research project.

What type of proposal is this?

This is a research proposal. Before beginning to write this application make sure you clearly know what your research question is. This is not a consulting proposal or a proposal for a development project. You are not simply helping your companu/organization partner to achieve a task. You are looking to expand the knowledge base in an area that is relevant to both your company/organizational partner and the academic community. For more information about eligible research and assistance in reviewing/developing your proposal for Mitacs Accelerate International, please contact a Business Development Representative.

How long should my proposal be?

There are no length limits on the application form because we do want you to use the space you deem necessary to clearly present your research project and provide enough details so that it can be evaluated by external reviewers.

What is the format and style of the proposal?

Think about this proposal the way you would think about writing a scientific/academic article. The type of information, including citations and a reference list, that is appropriate in these types of articles is also appropriate to include in this application. Keep your statements concise, clear and orderly. Abbreviations should be explained the first time they are presented, and jargon should be avoided as much as possible. Improper spelling, poor grammar and punctuation will appear unprofessional and sloppy. Don't rely solely on spell-check for proof-reading to avoid these pitfalls.

The remainder of this guide provides information about specific sections of the Mitacs Accelerate International proposal template.

Research Abstract (section 3.2; approx. 200 words)
The research abstract will be used to recruit reviewers. It must therefore clearly summarize the research proposed including research problem to be addressed and its significance, objectives, and proposed methodology. We suggest an approximate length of 200 words. Please note that abstracts that are too long will be truncated. Moreover, long abstracts have a deterring effect on reviewers and might delay their recruitment as well as the evaluation of your proposal. The research abstract is mandatory and will remain confidential. In this way it differs from the public project overview (section 7.2) which is targeted at a lay audience and will appear on our web site.

Background and review of relevant prior work (section 3.3; 500 words minimum)
The background information describes the research context for your project. Describe the nature of the research problem to be addressed and why it is important, as well as any holes or gaps in the research – in particular, it should identify the gap(s) that you plan to address in your internship. This section must contain references to past work on the subject you're investigating. References to academic literature should be cited in the text in a style typical in your field and listed in section 3.8. Only list references that are cited within your proposal. After reading the background section, reviewers should understand the state of the art and knowledge gaps in the research area that will be addressed by the intern, and be prepared to understand the objectives of the research project.

General objectives (section 3.4)
The objectives should follow directly from the background described in the previous section. Provide details of the research objectives for the internship. Here, it is possible to have many objectives (especially if describing a larger research project or collaboration) or to break down a general objective into sub-objectives.

Details of internship or subprojects (section 3.5)
In this section, we ask that you describe the proposed research in detail. It can be presented by general objective or subprojects (often used for more complex projects).

Specific objectives of the internship or subproject (section 3.5a)
The specific objectives should stem from the general objective and be specific to the intern. If the project is self-contained and only describes one (1) intern, the general and specific objectives can be identical and you can simply refer back to section 3.4. If the Section 3.4 describes a larger research project or collaboration in which this intern is a participant, then

list the objective(s) or subproject(s) specific for the intern. It is good practice to divide a project into several sub-objectives.

Methodologies (section 3.5b)

In this section you should describe the experimental method, computational, field or laboratory techniques (as relevant to your discipline) that you will use in the implementation of each of your objectives, as well as any equipment, procedures, or participants. For example, you might describe the experimental set up, what variables will be measured (and over what possible ranges), what are the controls, how data will be sampled, and how these data will be analyzed. If you will be conducting surveys or interviews, you should explain how many participants you will target, how you will select or recruit them, the length of the survey or duration of interview session(s), the design of the survey/interview questions, how the data will be analyzed, etc.

The methodology section is your chance to prove to the reviewers that you are well aware and knowledgeable about what you are proposing and why you are proposing it. With each objective or subproject proposed, break each one down and describe the experimental methods and how the methods you will use are going to help you achieve the objectives of the project. If the methods are established, convince the reviewers that you are familiar with them and that the technology is available. If the methods are innovative, explain how they will offer an improvement. If there are any anticipated challenges, highlight them and propose solutions.

Tips:

- Describing the methodology for each sub-objective makes it easy on reviewers to assess each section. It will also facilitate matters for the Timeline section.
- Provide enough detail to enable peer reviewers to evaluate the proposed methods and techniques. Include relevant references and citations to previous research in your field as needed.
- Do not assume that reviewers will be familiar with all the terminology and current methodology. Avoid statements like "We will use standard techniques to measure the soil composition." Give detailed information about how the samples will be collected, exactly what techniques will be used, and what measurements will be taken.
- Avoid using an overabundance of personal pronouns, such as "I/We will"
- Your proposal should demonstrate that you:
    - Have an up-to-date knowledge of your field.
    - Understand the complexity of the subject and the methods you will apply.
- Be sure to clearly describe how you plan to analyze the data you collect. The reviewers will be looking for this information.

- Acknowledge any potential difficulties you foresee and how you might address them. There is always an element of uncertainty in a research project. Show the reviewers that you've thought about the uncertainties in your project and have some ideas about how you will adapt your approach if needed.

Timeline (section 3.5c)

The timeline is used to show which task(s) will be performed and when to achieve which objectives. The timeline should clearly link the key methodological steps presented in section 3.5b with the specific objectives presented in section 3.5a. We propose using a Gantt chart for clarity, but other formats are acceptable.

Expected deliverables (section 3.5d)

Every project includes the Mitacs Final Report and Mitacs survey as basic deliverables. Please also list any other expected deliverables of the project (publication, Master's and PhD theses, patent, prototype, report, conference, exhibit, etc.). Please note that we expect that the new knowledge gained through the proposed research will be publishable or disseminated in a format appropriate to the field.

Benefit to the intern (section 3.5e)

Describe how the intern will benefit from the opportunity to interact directly with the partner organization as part of this research project. Describe any other special benefits afforded the intern (i.e. benefit from working with a partner company in a foreign country) as a result of participating in this internship.

Interaction and Justification - inbound to Canada (sections 3.5f and 3.5g)

It is expected that you will spend up to a maximum of 75% of your internship in Canada, divided between the company and the host Canadian university. Time at the company should be spent interacting with personnel from the organization, most likely at their site, or in the field, as appropriate to the project. The project requires that a host university in Canada be involved, and that time be spent there under the guidance of your host academic supervisor. Please indicate the amount of time split between the company and host Canadian university. The balance of the internship (minimum 25%) should be spent at the intern's home university in their respective country. Variations from this guideline are possible in certain cases, and should be discussed with your Mitacs Business Development Representative prior to application submission. This should be justified in section 3.5g.

Partner interaction (section 3.5h)

Use this section to give the reviewers a clear description of the time the intern will spend on-site with the company, including number of weeks and % of time. What activities will they undertake on site or in the field with the company? Where will they work? Are there any special facilities or equipment that will be available at the partner site to help them carry out the research project? Which personnel from the organization will the intern work with and be supervised by? What expertise do those individuals bring to the project and to the intern's work?

Relationship (if any) to past/other Mitacs Accelerate International internships (section 3.7)

This section applies if you have done an internship yourself in the past or if someone else working on your project within your research group has done a Mitacs Accelerate International internship or relevant participation in any Mitacs program, in the past. Please note the intern name and internship or fellowship title in this section and explain in a sentence or two how the work being proposed for this internship relates to the previous one. If you or your group are currently submitting other applications to Mitacs Accelerate International, please note that here, too.

Funding, Budget and Invoicing (section 5)

The start date of the project cannot predate the research approval of the project, the receipt of partner funds and receipt of the Mitacs Student Code of Conduct and Ethics & International Pre-Departure Forms for the internship. Costs can only be incurred after approval of the project.

Project Expenses (section 5.2)

A detailed description of eligible expenses for 'Total Research Costs' is available on the NSERC website at the following link: http://www.nserc-crsng.gc.ca/Professors-Professeurs/FinancialAdminGuide-GuideAdminFinancier/FundsUse-UtilisationSubventions_eng.asp

Suggested reviewers (section 6)

Provide the names and contact information for 6 people who would be qualified to review your proposal. Reviewers are typically faculty members, but can also be PhD-level scientists doing research in company or government agencies. The suggested reviewers do not need to be Canadian/Norwegian. "Arms-length" means that they must be from a different university, and that you and/or your supervisor and/or partner must not have collaborated with them in the last 5 years. You do **not** need to contact these people yourself, simply provide their names and information.

Public Project Overview (section 7.2)

This section is a brief summary of your project. It should be written in plain language, as if you were explaining your project to a high school student. Avoid using acronyms and scientific jargon. Writing a good lay summary is

a very important skill to have. Funding agencies may use the lay summary for press releases/annual reports and also to attract potential donors. Lay summaries must be simple and direct while giving the reader a reason to care. Explain why the research is significant to the general public (people who don't do research for a living). Briefly explain the motivation for the project, the problem to be addressed, how you are planning to address it, and the anticipated impact to the partner. After you've written it, ask a friend to review it.