



IMPACT PROGRAM

Thematic call for projects guide:

Orbit Health

Innovations supporting remote healthcare in space and on Earth

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1. Introduction

Founded in 2012 and comprised of over 200 members, MEDTEQ+ is a non-profit organization strategically located at the core of the healthcare technology sector, with a mission to stimulate collaboration among key players within the ecosystem.

MEDTEQ+'s mission is to accelerate the development of innovative solutions, as well as their validation and integration into healthcare networks, while positioning Canadian medtech sector products and services locally and internationally. This effort aims at creating substantial economic impact while addressing the challenges that hinder the improvement of patient care.

These challenges are even more important when access to medical resources is restricted. For example, as space travel extends beyond low-Earth orbit to the Moon and Mars, crew health issues become increasingly complex. Innovation in space medicine is essential to the success of future manned space exploration missions, such as those to the Moon or to Mars. There are many challenges involved in ensuring astronauts' health in the extreme conditions of space, remote distances and limited medical accessibility. As a result, all over the world, many engineers, researchers and entrepreneurs are currently helping to develop innovations to support space exploration, which may also be **applicable to our planet's rural, remote or northern communities, where medical resources are difficult to access.**

Orbit Health is a call for projects designed to support Canadian companies in the development of technologies that will fulfill telemedicine and autonomous healthcare needs. This thematic call is part of MEDTEQ+'s IMPACT program.

This call for projects is carried out with the financial support of the **Canadian Space Agency (CSA)** through the [Grants and Contributions Global Program](#) (S and C Program) to support research, awareness and education in space sciences and technologies - Research Component. **A total of \$1.8 M CAD** has been allocated to MEDTEQ+ for this call.

2. Objectives

MEDTEQ+'s IMPACT program aims at supporting the structuring and the financing of research projects, as well as the development and the validation of healthcare technologies, **involving at least one company**. **The Orbit Health call for projects** aims at supporting the development of healthcare technologies specifically designed for space and/or **in remote areas in Canada**, with the aim of enhancing the self-reliance of healthcare practitioners operating in these environments.

The Orbit Health call for projects aligns with two of CSA's major priorities¹: "Leveraging innovations in health and nutrition from remote space" and "Building a resilient economy."

¹ Champagne, François-Philippe (2023), Plan ministériel 2023-2024 Agence spatiale canadienne

3. Eligibility

3.1. Eligible organizations

The Orbit Health call for projects is open to all eligible Canadian companies², with priority given to SMEs and startups, wishing to develop innovative remote healthcare technologies applicable in both space and terrestrial contexts. Companies with more than **499 employees** are considered **Large Enterprises**.

An eligible Canadian company may submit a project if it meets the following criteria:

- be legally incorporated under the current federal laws and registered with the Canadian Business Registry;
- have its headquarters in Canada, and its employees or subcontractors must primarily work from Canada;
- does not have a majority ownership (50% or more) by other existing companies or organizations;
- be a member of MEDTEQ+. If the company is not already a member, it can easily become one by applying online. For more details, visit: <https://www.medteq.ca/en/become-a/member/>

Ineligible companies include:

- Government corporation or companies controlled directly or indirectly by a government (municipal, provincial, or federal), a municipal entity, or companies that are majority-owned by a government corporation;
- and/or under the protection of the Companies' Creditors Arrangement Act (R.S.C., 1985, c. C-36) or the Bankruptcy and Insolvency Act (R.S.C., 1985, c. B-3).

Furthermore, it is not possible for a company to submit more than one project for this call.

3.2. Eligible projects

Eligible projects are intended to support companies who develop healthcare technologies that can serve populations in remote regions on Earth and/or in space. Priority will be given to projects led by startups and SMEs.

Projects must meet the following priorities and requirements:

- The proposed project is focused on **research and development** of healthcare technology innovations specifically designed for use in remote space environments and distant regions on Earth to enhance the autonomy of healthcare professionals working in these areas;

² Academic and public research centers can participate in projects through a service offering.

- The developed innovations must offer a significant advantage over existing solutions on the market;
- The proposed project involves a technology with **an initial Technology Readiness Level (TRL) between 4 and 7 (see Appendix 1)** in line with the priority of generating tangible outcomes with short-term adoption potential.

4. Financing modalities

4.1. Financing

Financing modalities:

- The grant will provide a non-refundable financial contribution of up to \$300,000 CAD per project.
- For startups and SMEs, MEDTEQ+'s contribution cannot exceed 75% of the total eligible project cost.
- For large enterprises, MEDTEQ+'s contribution cannot exceed 50% of the total eligible project cost.
- Private contribution must account for a minimum of 25% of the total eligible project expenses for startups and SMEs, and 50% for large enterprises.
- Combined assistance from different levels of government (municipal, provincial, and federal) cannot exceed 75% for startups and SMEs, and 50% for large companies, of the total eligible project expenses.
 - Contributions, considered as government assistance, include direct and indirect assistance received in the form of non-repayable contributions such as grants or tax credits, repayable contributions (loans, convertible debentures, royalty repayable contributions, loan guarantees, and equity investments) originating from:
 - provincial government departments and agencies;
 - government of Canada departments and agencies;
 - organizations primarily controlled by a government department or agency;
 - partners managing funds from government departments or agencies;
 - municipal entities, including municipalities, regional county municipalities, metropolitan communities, and agglomerations, as well as any legally constituted entity where at least half of the members are appointed by or fall under one of these organizations.

Example 1: Startup and SME (Small and medium-sized enterprise):

Funding source	Amount (\$)	Percentage (%)
Private contribution – Enterprise	100 000 \$	25 %
Public contribution – MEDTEQ ⁺	300 000 \$	75 %
Total	400 000 \$	100 %

Example 2: Large company:

Funding source	Amount (\$)	Percentage (%)
Private contribution – Enterprise	300 000 \$	50 %
Public contribution – MEDTEQ+	300 000 \$	50 %
Total	600 000 \$	100 %

Use of project funding:

- Funding must be used solely to support **eligible expenses of the company submitting the funding request**.
 - To support space-related research and studies and develop a critical mass of researchers and highly qualified individuals, companies will have the option to **collaborate with academic centers and research facilities. Expenses incurred at these centers will be eligible** in the form of a **service offer** to the company submitting the funding request. For more details, refer to APPENDIX 2 - Example of Service Offering.
- The organization must inform MEDTEQ+'s account manager of any potential issues and changes to the project as soon as they may arise, so that necessary measures can be promptly implemented.
 - If eligible expenses decrease or funding partners' contributions are modified, MEDTEQ+'s contribution may be reduced to comply with the call for projects' rules.
 - Similarly, if the project is terminated during its execution, MEDTEQ+'s contribution may be reduced, and a refund may be required to comply with the call for projects' rules.
 - Additionally, it should be noted that any project cost overruns beyond what was originally presented to MEDTEQ+ must be covered by the recipient.

4.2. Eligible expenses

Eligible expenses:

- are incurred by the company or by an academic/research center in the context of a service offering.
- are incurred between the project start date and the planned end date;
 - The project start date corresponds to the date of the project's first expense. It corresponds, at the earliest, to the final application submission date.
- are essential for project execution;
- correspond to costs specifically incurred to carry out the project;
- represent an item for which, in the absence of this project, equal or higher costs would be incurred;

- are subject to an audit, and their value can be reasonably established and supported by documentation.

They include the following expenses categories:

- Salary and social benefits costs;
- Training costs;
- Scholarship costs;
- Tuition fees;
- Subcontracting and consultation service costs up to 30% of the total budget;
- Equipment and supplies costs;
- Costs related to the acquisition, development, and printing of materials;
- Equipment acquisition or leasing costs up to 25% of the total budget;
- Costs of chartered air and sea services;
- Access fees;
- Costs related to obtaining security clearances;
- Data acquisition costs;
- Data management costs;
- Laboratory analysis service costs;
- Licensing and permit acquisition fees;
- Launch service costs;
- Publication and communication service costs;
- Translation service costs;
- Conference, committee meeting, and event participation fees;
- Registration fees;
- Travel costs;
- Accommodation and meal allowances;
- GST, HST, and GST, after deducting any entitlement to a rebate, and taxes on goods and services acquired abroad, after deducting any reduction or refund received in the country where these goods and services were acquired;
- Overhead (administrative) expenses (must not exceed 15% of eligible company costs and 20% of service offering costs).

The eligibility of expenses will be reviewed by the account manager responsible for the project responsible. For more details, please refer to section 5.1.

4.3. Ineligible expenses

Ineligible expenses include:

- expenses incurred before the project start date, including expenses for which the company has made prior contractual commitments;
- operating expenses for regular business activities;
- recurring fees such as annual subscription fees and software update fees;
- capital and depreciation expenses;

- sponsorships;
- debt service, repayment of future loans, capital loss, or capital replacement, payment or disbursement as capital;
- intellectual property maintenance expenses;
- marketing expenses;
- building acquisition, construction, and expansion expenses;
- land acquisition or development expenses.

5. Call process and terms

5.1. Financial assistance applications: preparation, submission and evaluation

5.1.1. Preparation of application for financial assistance

Support

All individuals interested in this call should contact MEDTEQ+ as soon as possible via the following email address: projet@medteq.ca. You may also book a virtual meeting directly [here](#).

An introductory meeting will be held with a MEDTEQ+ account manager to assess the organization's eligibility and project. During this meeting, the organization's questions will be addressed, and the required forms will be explained and shared. If the organization is seeking partners, they can communicate their needs to the account manager, who can assist them in the process.

Subsequently, the **organization must become a member of MEDTEQ+**, and will benefit from the support of its account manager throughout the project development and funding application process, to ensure the quality and eligibility of the applications, as well as during project monitoring, if applicable.

Information session and FAQ

Two online information sessions will also take place on **February 15th 2024**, one in **French at 13h EST** and one in **English at 14h30 EST**, to introduce the call for projects and address any questions. **Individuals interested in the call should register to these sessions via the following link for the English session [here](#) and the following link for the French session [here](#).** The recorded information session will be available on the MEDTEQ+ website. Following these sessions, a Frequently Asked Questions (FAQ) will also be made available on our website.

First submission for financial assistance

To facilitate a review of its financial assistance application, the company must **submit its preliminary application as soon as possible** and no later than **March 15th 2024, 17h EST**. This should be sent to its account manager, with a copy to projet@medteq.ca.

The preliminary application includes:

1. The project statement, including the budget, written in French or English, in Word format;
2. If applicable: the planned service offers;
3. Optional: support letters from opinion leaders and potential stakeholders.

5.1.2. Final submission of the financial assistance application

Final submission

The company must submit its application by email before the financial assistance application deadline: **March 15th 2024**.

The subject's email should be "Orbite Health - Financial Assistance Application Submission - Your Company Name" and sent to projet@medteq.ca. **Individuals involved in the project and mentioned in the financial assistance application, as well as your MEDTEQ+ account manager, should in the copy of the email.**

The submitted application will be considered **non-eligible** and, therefore, rejected if any section of the project statement is incomplete, if the **submission deadlines** are not met, or if **any eligibility criteria** of the program are not adhered to.

The complete application to be submitted during the final application must include:

1. The completed **project statement**, including the budget, in French or English, signed by the company's CEO, in PDF and digital format (signature pages may be scanned);
2. If applicable: the completed and signed **service offers**;
3. Optional: **support letters** from opinion leaders and potential stakeholders.

In addition to the project submission, companies must provide their **financial statements for the last 2 years** (or projected financial statements for startups), **financial projections for 2 years, and cash flow statements for 2 years**. This is to validate their ability to finance their contribution to the project and to adjust payment terms based on the company's financial risk level.

5.1.3. Evaluation of financial assistance applications

Evaluation Committee

MEDTEQ+ has an evaluation committee composed of 15 voting members and observers. These include industrialists (in the majority), academics, clinicians, and patient representatives, plus external evaluators, who together have the necessary skills for each of the projects to be

evaluated. As part of this call for projects, this committee's expertise will be used to set up an evaluation committee that will assess the various aspects of the applications and select the projects.

Criteria

The evaluation criteria include the following elements:

ELIGIBILITY

- stakeholder eligibility;
- project eligibility.

RELEVANCE WITH PROJECT CALL OBJECTIVES

- benefits for Canada according to ASC priorities (e.g., leveraging innovations in health and nutrition from deep space and S building a resilient economy);
- [Link](#) to S and C* program objectives.

PROJECT RESOURCES

- team expertise;
- future professionals' training;
- material and financial resources.

PROJECT DESCRIPTION

- state of the art;
- innovative nature of the technology;
- competitive profile;
- TRL justification;
- work plan.

EXPECTED OUTCOMES

- results;
- economic and technological impact for the industrial partner(s);
- socio-economic benefits for Canada.

IMPLEMENTATION PLAN

- feasibility;
- risks and mitigation measures.

MATURATION PLAN

- intellectual property management and commercialization plan.

*the objectives of the S and C Program within the context of this call for projects:

- Support the development of science and technology related to CSA priorities;

- Promote the ongoing development of a critical mass of researchers and highly qualified individuals in Canada within CSA's priority areas;
- Support data collection, research, and space-related studies;
- Support the activities of organizations dedicated to space research;
- Support the development of technology originating from a terrestrial health technology organization with significant potential for space applications. This aligns with CSA's priority in space research and development to advance science, technology, applications, and expertise;
- Generate tangible benefits for remote communities through technologies designed specifically for remote contexts and with short-term adoption potential in terrestrial markets, ensuring sustainable future innovation. This aligns with CSA's objective of effectively developing and positioning the Canadian space sector.

Evaluation process

There will be two decision-making factors when it comes to financing a project:

- The evaluation committee's decision: during the project evaluation meeting, the Committee has three possible decisions to make*.
- The ranking of the project according to the score awarded for the criteria in the evaluation grid.

***3 possible decisions:**

1. Unconditional recommendation

Additional details may be requested from the company, but they are not conditional for project recommendation.

2. Recommendation conditional on satisfactory clarifications

The Committee is considering recommending the project, but certain important aspects require clarifications. The company will have the opportunity to submit clarifications to the Committee, which will then decide whether or not to recommend the project.

Following receipt and analysis of the clarifications, each of the project's evaluators will be asked to send their final response:

Recommendation: the evaluator recommends the project;

Abstention: the evaluator chooses not to express an opinion and relies on the responses of other project evaluators;

Non-recommendation: The evaluator does not recommend the project. The evaluator must provide reasons for their position so that constructive feedback can be provided to the project team.

Based on the responses received from the evaluators, the Committee Chairman validates the Committee's decision to recommend or not recommend a project that has undergone satisfactory clarifications to the Board of Directors.

3. Non-Recommendation

The committee does not recommend the project.

The committee's funding recommendations and project rankings are then forwarded to MEDTEQ+'s Board of Directors to authorize the allocation of funding within the available budget.

Funding decision announcement

A letter will be sent to the companies that have applied for financial assistance, informing them of MEDTEQ+'s funding decision regarding their project. Companies whose projects have been selected will then be notified that they will soon receive a funding agreement. This agreement will specify the obligations of each party as well as the conditions of payment. A template of this agreement will be available for consultation before the letters are sent.

5.2. Projet progress

5.2.1 Payment and accountability procedures

Companies are required to be MEDTEQ+ members during both the project planning phase and the entirety of project monitoring. MEDTEQ+ reserves the right to withdraw, in whole or in part, the allocation paid if the organization or partner fails to meet the obligations outlined in the financing agreement or if the funds were used for other purposes.

In terms of disbursement procedures, the process will be divided into three instalments. The first instalment may be provided as an advance to assist teams in initiating the project, and it will amount to a maximum of **50%** of the grant, subject to the analysis of the company's financial documents. This instalment will be paid once the financing agreement is signed by the organization. This agreement outlines the specific terms and conditions that the company must adhere to secure the funding.

Close monitoring will be carried out throughout the project to ensure that objectives and expenditure are met as well as a formal progress report meeting halfway through.

Subsequently, procedures will take the form of reimbursement of expenses at the end of the project. Organizations will be asked to provide proof of expenditure (invoices, pay slips, proof of payment for fees, etc.) as well as an end-of-project report detailing progress towards project objectives. With documentation in line with the initially agreed plan, MEDTEQ+ will be able to disburse the final 50% instalment by the end of the project.

Funded organizations must have **completed their project activities by December 31, 2024**. A final project report, along with expense reports and supporting documentation for the current period, should be submitted by January 10, 2025. To expedite the final report validation process,

a preliminary report will be submitted by December 1.

The reports will be shared with the CSA (Canadian Space Agency) for accountability purposes.

5.2.2. Promotion and publication of results

Project promotion

Once the project Research agreement is signed, **MEDTEQ+ reserves the right to announce the title of the project, its summary, the names of partners and MEDTEQ+'s financial contribution through its website or any other means of communication.** The public project title and summary must therefore comply with the non-disclosure agreement signed by all partners.

Upon project completion, projects will be promoted, and their results will be presented. A showcase of the call for projects' success, including success stories, will be included.

Publication of results

It is hoped that the results of publicly funded projects will be disseminated as quickly and widely as possible.

Therefore, funded organizations are encouraged to utilize open-access publication and archiving. **MEDTEQ+ invites organizations to promptly publish their articles using one of the following methods:**

1. **Online deposition** accessible through an institutional or disciplinary platform, ensuring open access to publications.
2. **Journals** providing open access to articles.

It should be noted that these two methods are not mutually exclusive, and organizations are encouraged to utilize both of them.

It is also planned that MEDTEQ+ will receive, on a complimentary basis, and shared with the CSA, a copy of the funded organizations' publications (if they are not openly accessible) or their hyperlink (if they are openly accessible), along with their digital object identifier (DOI). The CSA will integrate them into its publication repository to enhance accessibility.

6. Timeline

Call launch	January 24 th 2024
Online information session – registration	February 15th 2024, French: 13h EST

	English : 14h30 EST
First submission deadline	March 1st 2024
Final submission deadline	March 15th 2024
Evaluation committee	April 11 th 2024
Additional clarification period if necessary	April 18 th 2024
Decision letters sent	May 17 th 2024
Signing of financing agreements	May 24 th 2024

7. Additional information

For any questions regarding this call for projects, contact: projet@medteq.ca

APPENDIX 1 – Technology Readiness Level — TRL

TECHNOLOGY READINESS LEVEL (TRL)

The Technology Readiness Level is a scale or rating used to assess the level of maturity of an innovation. The definition of the TRLs provides the conditions to be met at each level, enabling accurate TRL assessment.

For each technological component (TC) answer the following questions:

Technology Readiness Level (TRL) of the technological component

Does the fundamental research exist?	NO »»	1 Base principles observed and reported
»» YES	NO »»	2 Technology concept and/or application formulated
Are the concept or the applications formulated?	NO »»	3 Analytical and experimental critical function and/or characteristic proof-of-concept
»» YES	NO »»	4 Component and/or breadboard functional verification in laboratory environment
Do analytical studies support the proof-of-concept of your technology?	NO »»	5 Component and/or breadboard critical function verification in a relevant environment
»» YES	NO »»	6 Model demonstrating the critical functions of the element in a relevant environment
Did you attest on a small scale, in lab environment, the expected performance of the integration of the TC in the general operating context?	NO »»	7 Model demonstrating the element performance for the operational environment
»» YES	NO »»	8 Actual system completed and accepted <i>for the application</i>
Did you validate in a relevant environment the expected functional performance of the integration of the TC in the general operating context?	NO »»	9 Actual system <i>in action</i> through successful mission operations
»» YES	NO »»	
Did you attest the expected functions of the TC in a relevant environment simulating the operating environment?	NO »»	
»» YES	NO »»	
Did you demonstrated the prototype in a operational environment?	NO »»	
»» YES	NO »»	
Did you prove that the technology works in its final form and in the environnement intended?	NO »»	
»» YES	NO »»	

Sources:
 - Ministry of Economy, Science and Innovation (MESI)
 - Ministry of Innovation, Science and Economic Development Canada (ISED)
 - ISO 16290-2013



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APPENDIX 2 – Service offer example

The service offer from academic, research centers, or other subcontractors must include at least the following elements:

1. Mandate definition

- Clearly outline your service offer in line with the objectives;
- Specify the expected outcomes and describe the deliverables during and at the end of the project.

2. Methodology

- Specify the proposed methodology and working techniques that will be used based on the stages and activities of the implementation plan. Depending on the nature of the project, specify:
 - the work that will be carried out.
 - the uncertainties to be resolved and the risk mitigation plan.
 - the various deliverables.

3. Implementation plan

- Present the implementation plan for the main stages and activities to be carried out as part of this project, based on the human resources allocated to it; A graphical presentation, such as a Gantt chart, is required.

4. Cost Allocation

- Specify the costs associated with various expenditure items.

5. Details

- Specify in your offer the billing terms, payment methods, offer validity period, confidentiality terms, and intellectual property management modalities. In addition, the agreement should detail any human, material, and financial contributions to the project;
- Note that it is possible to add a clause to the service offer indicating that it will come into effect conditional on approval of MEDTEQ+ financial support;
- It is also recommended to include a clause to obtain feedback from the applicant(s) at the end of the project regarding their satisfaction with the services provided.

6. Signatures

Authorized individuals from the parties involved in the agreement must sign the service proposal.