Digital Health Innovation Fund
Inaugural Request for Applications

Introduction

I. Background

The DHDP takes a pan-Canadian approach, leveraging a collaborative network of key experts and partners, to deliver a robust and secure infrastructure for data sharing coupled with a world-leading data and technology framework.

Funded through Canada's Innovation, Science and Economic Development fund (SIF, Stream 4) and led by the Terry Fox Research Institute, the Digital Health and Discovery Platform (DHDP) is focused on improving health outcomes of Canadians by bringing together industry leaders, health researchers, and AI and data scientists to accelerate medical breakthroughs and advance precision medicine.

With rapid advancements of AI in recent years, there continues to be a pressing need for access to more rich patient data to train, validate, and implement reliable and trustworthy AI models in real-world settings.

The goal of the DHDP is to build and operate a scalable multi-use platform to digitally-enable national and international collaboration to advance next-generation, state-of-the-art data governance principles (i.e., FAIR: Findable, Accessible, Interoperable, Reusable) and technology (i.e., distributed machine learning, identity management, data governance technologies) to transform health research as a collaborative, economy-building ecosystem linking healthcare data with artificial intelligence to improve patient outcomes.

DHDP Data Ecosystem

- Fostering a **network effect** across DHDP members to break data-sharing barriers and drive impactful collaborations between the private-sector industry and public sector (e.g. academia).
- Employing OMOP, **an international data standard** recognized for its extensible and flexible common data model, to support interoperability across diverse datasets and diseases.
- The DHDP's roadmap includes **multi-modal data (EHR and EMR, clinical, genomic, and imaging)** to prioritize oncology, neurology, and other disease areas that benefit from these data types.
- Privacy-by-design through **federated distribution of de-identified data,** meaning data remains behind institutional firewalls, and is protected under access controls set by data providers.

Platform Functionality

The Platform operates through a cloud orchestrator in a federated network of edge storage and computing. By adopting FAIR (Findable, Accessible, Interoperable, and Reusable) principles, DHDP improves the ways in which data is made accessible under governance structures, traced, and re-used for computational analysis.

User functionalities: Discover. Prepare. Analyze.

- Data discovery through the querying of fields and exploration of aggregate statistics and data visualizations.
- Data policy management allows data providers to set their custom data access parameters before sharing data. Data providers can also audit the jobs done on the data they have shared.
- Advanced analytics include data science and machine learning (ML) applications in healthcare.

Privacy-Enhancing Technologies (PET)

- Federated Learning (FL) enables scalable access to data for the development of ML models across multiple decentralized nodes (e.g., hospitals, clinics) while preserving sensitive data by keeping it localized at each site.

II. DHDP Current vs Future State

Current state

The Platform Minimum Viable Product has been developed, integrating DHDP's technical partners' existing solutions into one unified platform. DHDP continues technological development using end-user feedback and agile methodology to drive continuous platform improvements. At this stage, the Platform is categorized at Technology Readiness Level (TRL) 4. Refer to appendix for definitions and refer to the DHDP Data Ecosystem on page 1 for the prioritized data types and disease domains shaping Platform development. *Next steps:* A sandbox environment will become available for DHDP Network members in summer 2025 to allow potential applicants interested in DHDP to explore the Platform functionalities and workflows.

Future state

During the Request for Applications process execution throughout summer and fall 2025, the Platform will be deployed at select pilot sites to test and improve end-to-end workflows, implement the OMOP Common Data Model, and develop data acquisition processes to assist new data providers with Platform onboarding. Go-Live of the fully tested and functional Platform, with a robust and secure infrastructure, OMOP data model deployed, and easy-to-navigate workflows, is scheduled for January 2026. The Platform will be available to project teams who are selected for the Digital Health Innovation Fund shortly after the Request for Applications process is complete.

DHDP Digital Health Innovation Fund

I. Description

The DHDP is launching a Request for Applications for the Digital Health Innovation Fund. The purpose of this opportunity is to support the development of research programs through their use of the Platform. While the fund prioritizes oncology and neurology research programs, the DHDP is a disease agnostic initiative. Applications focused on other areas of health and AI research where similar data may be available (eg. diabetes, cardiology) will also be considered. By identifying and selecting research initiatives for their compelling science, projects will advance the design and use of the Platform to support meaningful and impactful projects. In parallel, the intention is to stimulate collaboration among small- and medium- sized enterprises (SMEs), while adopting a view toward the commercialization potential of research discoveries.

II. Eligibility Criteria

This competition is open to all private-sector and public organizations (for example, academic, health and research institutions and their foundations, independently owned businesses or industries, multinational enterprises (MNEs), non-governmental organizations (NGOs), and granting agencies) from across Canada. Each project must actively involve two (2) Canadian small- and medium-sized enterprises (SMEs) through a project team of two (2) or more representatives.

Recognizing that potential applicants may not have existing collaborative partners to meet project requirements listed below, we welcome those interested in Matchmaking Assistance to indicate this on the Expression of Interest (EOI) survey: https://forms.microsoft.com/r/ytyVR1KwZV.

The minimum requirements for a project team:

1. Inclusion and involvement of two (2) or more Canadian small- and medium-sized enterprises — SMEs — defined as fewer than 499 employees.
2. Inclusion of a data provider who wishes to share health data through the DHDP.
    a. Data providers must be able to conduct the project within Canada.
    b. Data providers should have overall agreement and alignment with the proposed project team regarding how data would or would not be accessed, and how it would be used to collaborate on the proposed project.
    c. SMEs who have access to data that is necessary to carry out their proposed project only require two (2) SMEs, at minimum, to form a project team. SMEs that do not have access to data required to advance their research must identify data providers to collaborate with.

3. Applicants who are not currently members of the DHDP Network are required to obtain DHDP Network membership to be eligible for funds. Visit https://www.dhdp.ca/membership/joining-the-dhdp to learn more.

Note about project teams:
*SMEs, data providers, and MNEs may participate in multiple proposed project teams.
*The Platform equips data providers with a software toolkit to enable rules of engagement. No data is copied to DHDP. See pages 1 and 2 for details on the DHDP Data Ecosystem and Platform functionality. See educational resources for more information under the funding opportunities page.
*Examples of data providers could include but are not limited to principal investigators, physicians, R&D teams (industry, academic, not-for-profits, etc.)

At minimum, an eligible project must:

1. Develop project use case(s) that will leverage the Platform functionality to advance compelling research and the design and use of the DHDP.
2. Outline a proposed project that is undertaken in Canada over an 8–12-month project period. Please outline the expected increase in Technology Readiness Levels (TRLs) overtime. Refer to appendix for TRLs definitions.
3. Demonstrate feasibility in the technical approach and have financial capacity to carry out the proposed project.
    a. Proposed projects must ensure that the combined level of financial assistance from all governmental sources (federal, provincial, or municipal) does not exceed seventy-five percent (75%) of Eligible Supported Costs incurred by any Industry Collaborator and one hundred percent (100%) of Eligible Supported Costs incurred by any Academic Collaborator.
4. Develop a pilot protocol to:
    a. Detail regulatory requirements that must be fulfilled (e.g. hospital or institutional privacy and security) for the data provider to share data.
    b. Plan data pipeline activities such as data mapping to OMOP data model.
5. Outline a commercialization plan which addresses the following:
    - Include a rationale that details the project plans for generating and protecting Project Intellectual Property (IP). Refer to appendix for definitions.
    - Explain measures that have taken place, or will be taken prior to January 2026, to ensure the right to access and use to Background IP required for the proposed project's execution.
    - Develop an IP monetization and patent filing strategy covering:
        - the generation of IP;
        - how revenues generated from the IP will be shared;
        - and who will be responsible for filing and maintaining patents

III. Funding Opportunity

A total of up to $25-million will be available until March 2027 through the Government of Canada's Innovation, Science, Economic, and Development (SIF, Stream 4) fund, which will operate under a reimbursement model. It is anticipated that individual eligible project costs will have a cost between $1-5 million.

DHDP will provide data providers with support onboarding the Platform, including financial and/or resourcing support related to data readiness such as data mapping to the OMOP data model and data curation needed to use the Platform at sites local to the data.

SMEs, MNEs and, if applicable, other collaborators must contribute a percentage of the total Eligible Supported Project Costs. Funds are provided to successful projects using a reimbursement formula with the reimbursement ratio (20-25%) of each project determined on a project-by-project basis. This will be based on a pragmatic and eligible budget proposed by the applicants, the total SIF-eligible expenditures, and funds available.

Eligible SIF funds may be stacked with other federal, provincial or municipal governmental assistance, provided the collaborator does not exceed their maximum government assistance ratio. Project teams must demonstrate that the combined level of financial assistance from all governmental sources does not exceed seventy-five percent (75%) of Eligible Supported Costs incurred by any Industry Collaborator and one hundred percent (100%) of Eligible Supported Costs incurred by any Academic Collaborator. This limit will be calculated for each individual Eligible Project.

IV. Application Process and Key Dates

Note on Matchmaking Assistance: Matchmaking efforts will be based on shared research focus (e.g., specific cancer or disease) and data accessibility. While there is no guarantee and it is entirely optional to collaborate with matches identified, project teams should apply only when there is mutual interest.

Each project will follow a multi-stage review process:

Event	Purpose	Dates (2025)
Digital Health Innovation Fund launch	The Request for Applications call for the Digital Health Innovation Fund is now available under the funding opportunities page.	**March 28**

Expression of Interest (EOI)	Complete this EOI survey to indicate your interest in the funding opportunity and if you require Matchmaking Assistance to form an eligible project team. The information in this survey will assist us with this work.	**Due July 15**
Webinars and Q&A	Please submit general questions using the form at the bottom of the funding opportunities page. Alternatively, questions may be sent to dhdp@tfri.ca. Invitations will be sent to those who completed the EOI survey in addition to existing DHDP Network members.	**English Webinar:** May 2nd, 2025 **French Webinar:** May 9th, 2025
Letter of Intent (LOI)	One (1) LOI per project team should be submitted including representation from at least 2 SMEs. Please see details below this table for LOI requirements. More information, such as templates or guides, will be posted shortly.	**Due September 15**
Invitation for Full Applications	LOIs are assessed for eligibility and alignment with DHDP objectives. Select project teams will be invited to submit a full application.	**October 1**
Deadline for Full Applications	The deadline for full applications is November 31, 2025.	**Due November 15**
Project Selection	The DHDP Eligible Project Selection Review Committee will evaluate each project. See application review process below for more information.	**December 2025**
Funding Start Date	Successful applicants are informed, and funding details are communicated including start date	**January 2026**

V. LOI Requirements

The LOI must address the project **Eligibility Criteria** (section II on page 3-4), **LOI requirements** below, as well as the details provided in the **Selection Criteria** section on the next pages of this document.

At minimum, LOIs must include:

1. Summary of the composition of the proposed project team.
2. Overall description of the research question (research domain, goal of the project, expected outcomes and impact) and the project's technical approach.
3. Description of data available and use cases with an explanation that links to the DHDP Data Ecosystem and Platform functionality (see pages 1 and 2).
    a. Use cases may include, but are not limited to:
        i. Machine learning applications (eg. predictive analytics, clinician-assisted decision support, training and validation of diagnostic tools, development of new predictor variables)

   ii. Data science use cases and in-depth exploratory analysis (eg. scaling access to data to detect meaningful patterns among patient cohorts, such as rare disease cohorts)
   iii. Leveraging privacy-preserving analytical methods (e.g. federated learning)
   iv. Data augmentation or re-use of data for different analytical purposes and new insights
4. Commercialization plan, including an attestation that the relevant Background IP has been secured for the project. Refer to appendix for definitions.
5. High-level budget in accordance with SIF cost guidelines (to-be posted under the funding opportunities page) with justification demonstrating applicant's overall financial capacity and stacking plan to carry out and complete the proposed project.
6. Develop a pilot protocol outlining regulatory requirements and activities required for data mapping and sharing.
7. An evaluation plan detailing core metrics that will be used to measure project success. Please also explain how the following will be measured:
   a. Size of data (eg. number of cancer cases) shared through the Platform.
   b. Number of new products, processes or services commercialized.
   c. Number of new IP generated and patents filed.
   d. Return on investment and overall value outputs from project
   e. Number of new jobs created and maintained (full-time equivalents, co-op positions).
   f. Number of new businesses created.
   g. Number of research studies submitted or published in journals or conferences.

Application Review Process

An Eligible Project Selection Committee will be formed with domain experts who carry expertise relevant to the subject matter of projects (e.g. precision oncology). At least one-third of the Committee will include independent reviewers to ensure an appropriate assessment. TFRI will take proactive steps to safeguard the review process against conflicts of interest (COI) and will require candidate reviewers to attest that they have no COI. Feedback for full project proposals will be provided. Applicants are permitted to appeal the project selection process only on the basis of procedural error via email to dhdp@tfri.ca.

Selection Criteria

The selection criteria will consider the following components at a minimum:

- Economic, innovation, scientific merit, and potential health and social benefits.
- Benefits to the health and digital sectors in Canada.

- Technical feasibility and technological advancement.
- The potential for projects to stimulate commercialization, including a detailed commercialization plan (market opportunity, reimbursement & regulatory strategy, pilot protocol, IP and commercialization).
- Contributions to DHDP outputs and outcomes, including publications, R&D investments, new jobs (including co-op) and business creation, and IP generation.
- Representation of SME, MNEs and public-sector partners.
- Multi-institution collaborations (including hospitals and AI Institutions, SMEs, startups).
- Employee IP training, empowering employees to know their IP rights, relevant policies, and responsibilities in protecting proprietary information.
- Benefits which strengthen and promote the sustainability of the Network.

The DHDP supports a strong commitment to representation and diversity, encouraging applications from a diverse mix of organizations within the AI and health-care landscape. Underrepresented and/or disadvantaged groups, including women, Indigenous peoples, members of racialized minorities, people with disabilities, and LGBTQ2+ individuals are highly encouraged to apply.

Additional Resources

OMOP international standard documentation by the Observational Health Data Sciences (OHDSI) community:

- Common data model: https://ohdsi.github.io/CommonDataModel/
- Book of OHDSI: https://ohdsi.github.io/TheBookOfOhdsi/
- Software Tools: https://ohdsi.org/software-tools/
- Community forum: https://forums.ohdsi.org/

Federated Learning:

- What Is Federated Learning? | NVIDIA Blog
- Federated learning enables big data for rare cancer boundary detection | Nature Communications

Appendix A – Definitions and Acronyms

Members of the DHDP Network ("Network Members") may participate in a collaborative network contributing to the development, usage, operation, enhancement and/or the promotion of the DHDP Platform (the "Platform") which enables data discovery, sharing, and advanced analytics.

Acronyms

DHDP – Digital Health and Discovery Platform

EHR – Electronic Health Record

EMR – Electronic Medical Record

FL – Federated Machine Learning

FTE – Full-time Equivalent

IP – Intellectual Property

ML – Machine Learning

MNE - Multinational Enterprises

PET – Privacy-Enhancing Technologies

R&D – Research and Development

SIF – Strategic Innovation Fund

SME - Small- and Medium- sized Enterprise

Definitions

Industry vs. Academic Collaborator
Industry Collaborator – means corporations, including small- and medium-sized enterprises (SMEs), multinational enterprises (MNEs), and not-for-profit organizations, incorporated in Canada.

Academic Collaborator – means universities and colleges located in Canada which grant degrees or diplomas, and any research institution or academic health sciences centre owned, controlled, co-located, or formally affiliated by/with a Canadian university or college.

Eligible Projects

Eligible Project – means a project undertaken by a team which includes Industry Collaborators, and if applicable, Academic Collaborator(s). A project must meet the Digital Health Innovation Fund eligibility criteria, demonstrate high value according to the selection criteria, and meet the SIF expenditure cost and reporting guidelines including government stacking limitations.

Eligible Costs – means the Eligible Supported Costs and Eligible Not-Supported Costs incurred in Canada.

Eligible Supported Costs – means Eligible Costs that can be reimbursed through the Digital Health Innovation Fund.

Eligible Not-Supported Costs – means Eligible Costs not supported by the Digital Health Innovation Fund but instead includes contributions from other sources including funding from Industry Collaborators.

Intellectual Property

Background Intellectual Property – means IP already owned or controlled, or that is made, conceived or acquired by an external party.

Project Intellectual Property – means IP created, invented, conceived, produced, developed, or reduced to practice in carrying out an Eligible Project.

Intellectual Property – means all inventions, whether or not patented or patentable, all commercial and technical information, whether or not constituting trade secrets, and all copyrightable works, industrial designs, compilations of data or information, integrated circuit topographies, and distinguishing marks or guises, whether or not registered or registrable, and all rights pertaining thereto, including any rights to apply for protections under statutory proceedings available for those purposes, provided they are capable of protection at law.

Technology Readiness Level

Technology Readiness Level (TRL) – means technology readiness according to the Technology Readiness Level scale described below.

- TRL 1—Basic principles observed and reported: Lowest level of technology readiness. Scientific research begins to be translated into

applied R&D. Examples might include paper studies of a technology's basic properties.

- TRL 2—Technology concept and/or application formulated: Invention begins. Once basic principles are observed, practical applications can be invented. Applications are speculative, and there may be no proof or detailed analysis to support the assumptions.
- TRL 3—Analytical and experimental critical function and/or characteristic proof of concept: Active R&D is initiated. This includes analytical studies and laboratory studies to validate the analytical predictions of separate technology elements.
- TRL 4—Product and/or process validation in laboratory environment: Basic technological products and/or processes are tested to establish that they will work.
- TRL 5—Product and/or process validation in relevant environment: Reliability of product and/or process innovation increases significantly. The basic products and/or processes are integrated so they can be tested in a simulated environment.
- TRL 6—Product and/or process prototype demonstration in a relevant environment: Prototypes are tested in a relevant environment. Represents a major step up in a technology's demonstrated readiness. Examples include testing a prototype in a simulated operational environment.
- TRL 7—Product and/or process prototype demonstration in an operational environment: Prototype near or at planned operational system and requires demonstration of an actual prototype in an operational environment (e.g. in a vehicle).
- TRL 8—Actual product and/or process completed and qualified through test and demonstration: Innovation has been proven to work in its final form and under expected conditions. In almost all cases, this TRL represents the end of true system development.
- TRL 9—Actual product and/or process proven successful: Actual application of the product and/or process innovation in its final form or function.