
PROGRAM GUIDE:

Accelerating Innovations into CarE (AICE) – Concepts

PROGRAM OVERVIEW

Background

Health care expenditures in Alberta are increasingly unsustainable, with about \$2.4M spent hourly¹ and consuming approximately 40% of the provincial budget.² A growing and aging population, a higher prevalence of chronic disease, a higher demand for multidisciplinary care, and the complex and expensive process required to convert health research into new health interventions suggest that the rising trend in healthcare costs will not be slowing down any time soon. However, the advent of emerging methods and technologies promises to create products that deliver more effective and patient-centered care. Alberta needs to harness the power of emerging health opportunities to unlock the full potential of its health innovation capacity and realize the economic and health gains of a globally competitive health innovation ecosystem.

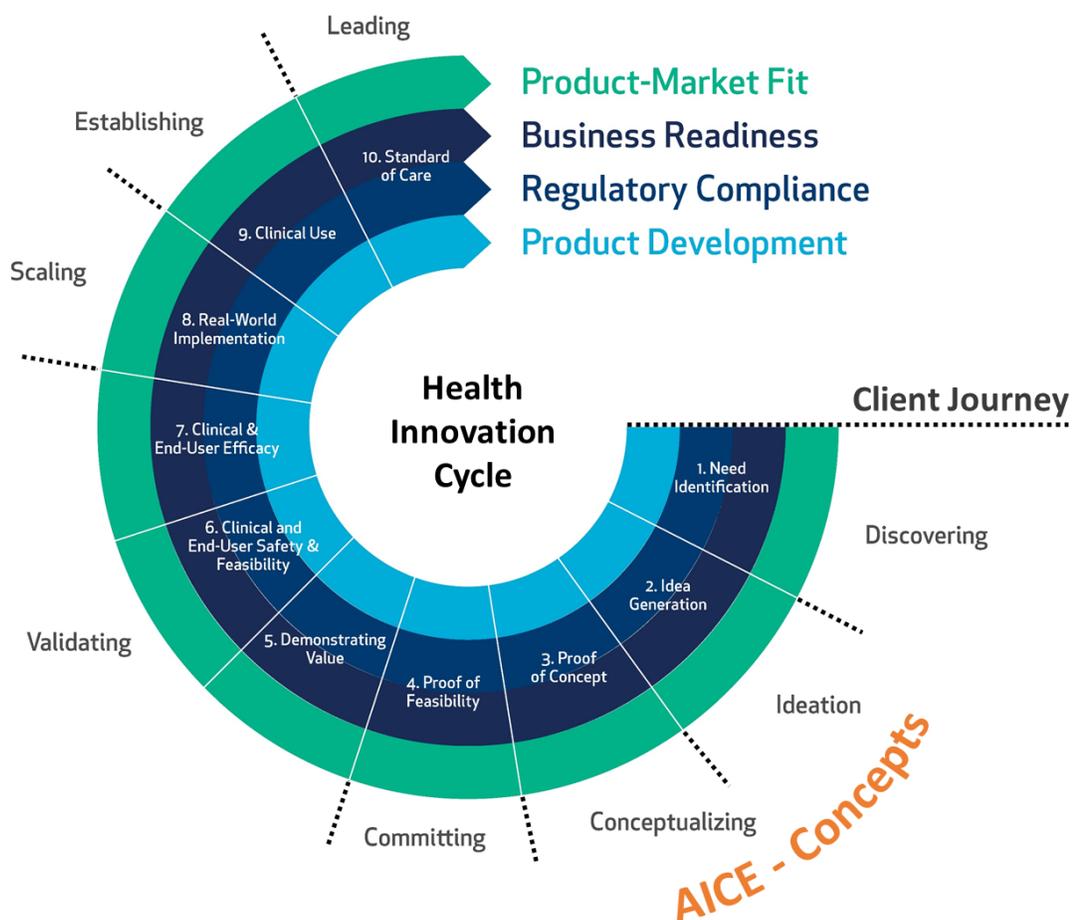
Program Details

The Accelerating Innovations into CarE (AICE) – Concepts Program (the “Program”) enables early-stage innovators to accelerate their commercialization journey from ideation through to conceptualization across four domains of commercialization as shown in Figure 1. The four domains are Product-Market Fit, Business Readiness, Regulatory Compliance, and Product Development (Figure 1).

The Program will be delivered in a series of closed-call streams that are designed to support early-stage innovation in emerging fields of health that are highly relevant to Alberta. The first stream addresses *three priority areas within the field of precision health aimed to optimize clinical decisions and maximize health benefits*. A detailed description can be found below in this section. Alberta Innovates will contribute up to \$600,000 CAD per project for a maximum of 36 months to support successful Applicants in the precision health stream.

For future streams, Alberta’s health innovation community is strongly encouraged to contact Alberta Innovates to present and explore ideas. Alberta Innovates strives to collaborate with Alberta’s innovation community to advance health innovation and maximize public investment benefits.

Figure 1. Health innovation cycle (adapted)³ and Alberta Innovates client journey towards commercialization. Each coloured track correspond to a commercialization domain. The tracks are sectioned into ten milestones from need identification to standard of care. The outer labels correspond to the client journey from discovering to leading. The AICE-Concepts Program enables innovators from the ideating stage to conceptualizing stage (orange).



The Program enables projects that span the following two milestones that correspond to ideating and conceptualizing stages:

1. **Idea generation** – Unmet health needs and state of the art solutions have been identified (i.e., discovering stage). Potential solutions to unmet needs proposed, evaluated, and selected.
2. **Proof of concept** – Key components are validated in models and value proposition is tested.

Detailed milestone activities can be found in the Health Innovation checklist found in our online [Grants Management System](#).

Stream 1 - Precision Health

Personalized and precision health is a rapidly emerging field and is of global interest.^{4,5} Personalized and precision health aims to optimize clinical decisions and maximize health benefits by integrating several pieces of information, including human physiological studies at both individual and population levels, understanding of diseases and disease pathways, as well as mechanisms of therapeutics.⁶ Personalizing or individualizing starts with the patient and the physician interaction⁷ and then proceeds with accurate diagnosis, treatment, and monitoring considering biological, social, and technological interactions.⁶ In the future, integrating precision health and artificial intelligence offers to complement, enhance, and accelerate clinical decisions leading to a nascent field of network medicine. Network medicine^{8,9} is a concept that advances precision health and integrates computer systems to reveal new insights towards functional interactions of biological components that can enhance the understanding of disease and identify more targeted therapeutic strategies. Again, the fundamental goal of clinical science is to maximize health benefits by using multiple approaches and comprehensive understanding to optimize clinical decisions. To this end, below are **selected priority areas** in precision health for this Precision Health stream to drive clinical decision optimization and enhance patient-centred care.

- **Disease prevention**
 - Social determinants of health
- **Diagnostics**
 - Medical imaging analysis;
 - Biomarker-based predictive, companion, or prognostic bioassays; or
 - Omics-based bioinformatics
- **Personalized therapeutics:**
 - Real-world evidence (i.e., patient outcomes to inform clinical decisions);
 - Personalized drug screening or repurposing; or
 - Digital therapeutics (e.g., simulations, extended reality modalities).

The Program is designed to enable and accelerate early-stage innovators along the commercialization client journey from ideating to conceptualizing and to support health innovation activities in identified priority areas of precision health.

How the Program Works

Eligibility

(a) Applicant Eligibility Criteria

To qualify as an Applicant, an entity must be:

- an Alberta-based post-secondary institution or government health authority;
- be in good financial standing with Alberta Innovates and its subsidiaries InnoTech Alberta and C-FER Technologies.

(b) Project Eligibility Criteria

To qualify for funding all projects must:

- address at least one clearly defined challenge that is relevant to a precision health priority area (listed above);
- address at least one health innovation domain within [ideating and conceptualizing stages](#);
- include key Project milestones based on measurable goals and deliverables, stepped with critical “go / no-go” decision points;
- submit to other criteria that Alberta Innovates may develop from time to time.

Program Objectives and Performance Measurement

The Program aims to realize health and economic benefits for Alberta. The Program provides resources to enable projects that center on precision health to drive clinical decision optimization and maximum health benefits.

Over the life of a Project, Alberta Innovates employs an active project management philosophy, regularly monitoring performance and supporting the Applicant to reach their objectives. Funding is tied to outcomes and achievement of results. For this reason, Alberta Innovates funds on a milestone completion basis. This means the Applicant is expected to submit a Progress Report before Alberta Innovates advances the next tranche of funds.

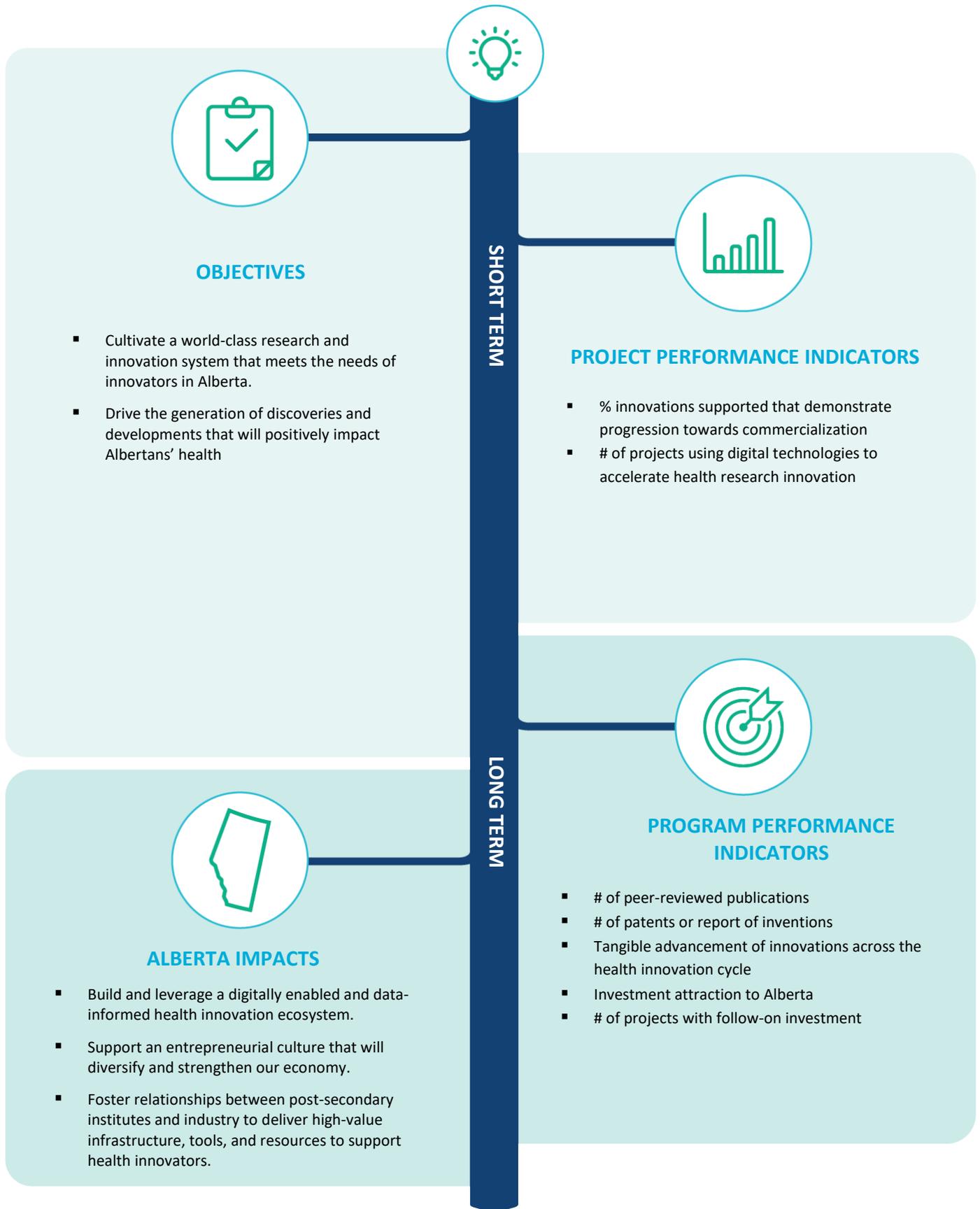
Once Projects are completed, Alberta Innovates continues to monitor performance for five (5) years to accurately evaluate the economic, social, and health benefits realized for the province.

All Investment Agreements outline performance indicators tracked over the course of the Project and the responsibilities of the Applicant to report on outcomes subsequent to the completion of the Project.

Alberta Innovates has a common set of performance metrics it monitors, both at the individual Project level and for the aggregate Program. These are highlighted on the next page.



Objectives and Performance Metrics



How Funding Works

(a) Project Funding

Alberta Innovates' Investment to a successful Applicant is up to \$600,000 CAD per Project for a term not to exceed 36 months. The funds are provided to cover Eligible Expenses only. Industry partnerships are encouraged. Funded projects will be required to provide a graphical abstract.

Disbursement of Alberta Innovates' Investment is determined on a case by case basis depending on the risks and needs of each successful Project, but funds will only be disbursed upon approval of required Progress and Final Reports.

Alberta Innovates will contribute up to \$600,000 CAD to support approved Projects over a maximum term of 36 months.

(b) Eligible and Ineligible Expenses

Alberta Innovates only funds reasonable costs incurred after the Effective Date on an Investment Agreement with you. Any costs incurred prior to the Effective Date in the Investment Agreement, or costs greater than market prices are deemed ineligible. Costs must be incurred between arm's length entities. Please refer to our standard form Investment Agreement found on our [website](#) to get an in-depth understanding of eligible and ineligible costs.

HOW TO APPLY



STEP 1 Registration

Deadline: December 7th, 2020 at 4:00 PM MST

All interested Applicants must register their intent to apply. This step is important so that Alberta Innovates can recruit appropriate reviewers.

To register, access the Application form for this Program on the Online application portal and **complete the non-confidential summary tab** and **save a draft** by the deadline.

Important: Any drafts without a completed non-confidential summary section by the registration deadline will be removed and unable to apply.



STEP 2 Application Submission

Deadline: January 6th, 2021 at 4:00 PM MST

Applications will be reviewed by a panel of reviewers by late February 2021. Funding announcement expected by early March 2021.



STEP 3 Project implementation and Evaluation

All Applicants must sign Alberta Innovates Investment Agreement by March 31, 2021. After agreement execution, the Applicant will work with Alberta Innovates to regularly monitor and report on milestone progress and achievement.

EVALUATION PROCESS

During the different phases of the program, Alberta Innovates leverages internal staff and external expert reviewers to evaluate the Applications submitted. Alberta Innovates evaluates promising projects based on criteria related to the relevance to the program and associated priority areas, market need being addressed, scientific merits of the project, strength of the team, potential impacts, and return on investment to Alberta. Detailed evaluation criteria are outlined in the online Application form.

Alberta Innovates retains sole right to determine the evaluation process and does not disclose the names of its external reviewers to ensure their objectivity and impartiality. All external parties are subject to both confidentiality and conflict of interest policies set by Alberta Innovates.

The assessment criteria and all investment decisions are at the sole discretion of Alberta Innovates.

TERMS AND CONDITIONS

This Program Guide is intended as a high-level overview of the Program. It provides interested applicants with a roadmap of what to expect over the lifecycle of an AICE-Concept Project, from the announcement of the Program, through the Application stage, during the Project and post-completion. Should you have any questions about this guide or what is expected, please contact Alberta Innovates. Please be aware Alberta Innovates may modify this guide from time to time in keeping with any changes to the program.

Alberta Innovates will only correspond in writing and provide copies of the Application to the persons named in the application form as the one authorized to speak for the Applicant.

Once we have evaluated and approved an Application for funding, Alberta Innovates will require the Applicant to sign our standard form Investment Agreement which can be found on our [website](#). The Investment Agreement sets out in detail the roles, responsibilities and obligations of the various Parties to ensure a successful Project. Alberta Innovates will not provide any funding until the Investment Agreement has been signed by all Parties.

Alberta Innovates will only fund Applicants who have satisfied all eligibility criteria. Meeting the eligibility criteria does not guarantee access to funding, and all funding decisions will be made by Alberta Innovates at its sole discretion.

EQUITY, DIVERSITY AND INCLUSION (EDI)

Alberta Innovates believes the Research and Innovation ecosystem is stronger and more sustainable when it is broadly reflective of the overall diversity of our community and therefore embraces the principles of Equity, Diversity and Inclusivity.

CONTACT INFORMATION

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References

- 1 Brooks, De Cillia. CBC News, March 25, 2018. <https://www.cbc.ca/news/canada/calgary/alberta-spends-2-4m-an-hour-on-health-care-here-s-what-s-being-done-to-reduce-it-1.4589048>. [Accessed 22 October 2020].
- 2 United Conservative Party Budget 2020. Ministry of Health Expenditures (\$22.2 Billion) as a fraction of total provincial expenditures (\$56.0 Billion). Fiscal Tables, <https://open.alberta.ca/dataset/budget-2020> [accessed 14 October 2020].
- 3 Adapted from the Consortia for Improving Medicine with Innovation and Technology (CIMIT) - Guidance and Impact Tracking System (GAITS) for Digital Medicine. <https://cimit.net/web/-digital-medicine/guidance> [accessed 5 November 2020].
- 4 <https://obamawhitehouse.archives.gov/precision-medicine> [accessed 20 October 2020].
- 5 <https://www.nature.com/news/china-embraces-precision-medicine-on-a-massive-scale-1.19108> [accessed 20 October 2020].
- 6 Ho, D. *et al.* Enabling Technologies for Personalized and Precision Medicine. *Trends Biotechnol.* **38**, 497-518, doi:10.1016/j.tibtech.2019.12.021 (2020).
- 7 Daniels, M. J. Universalism as an Aspect of the Personalized Treatment of the Patient. *Pacific Sociological Review* **7**, 17-21, doi:10.2307/1388462 (1964).
- 8 Barabási, A.-L. Network Medicine — From Obesity to the “Diseasome”. *New England Journal of Medicine* **357**, 404-407, doi:10.1056/NEJMe078114 (2007).
- 9 Barabási, A.-L., Gulbahce, N. & Loscalzo, J. Network medicine: a network-based approach to human disease. *Nature Reviews Genetics* **12**, 56-68, doi:10.1038/nrg2918 (2011).