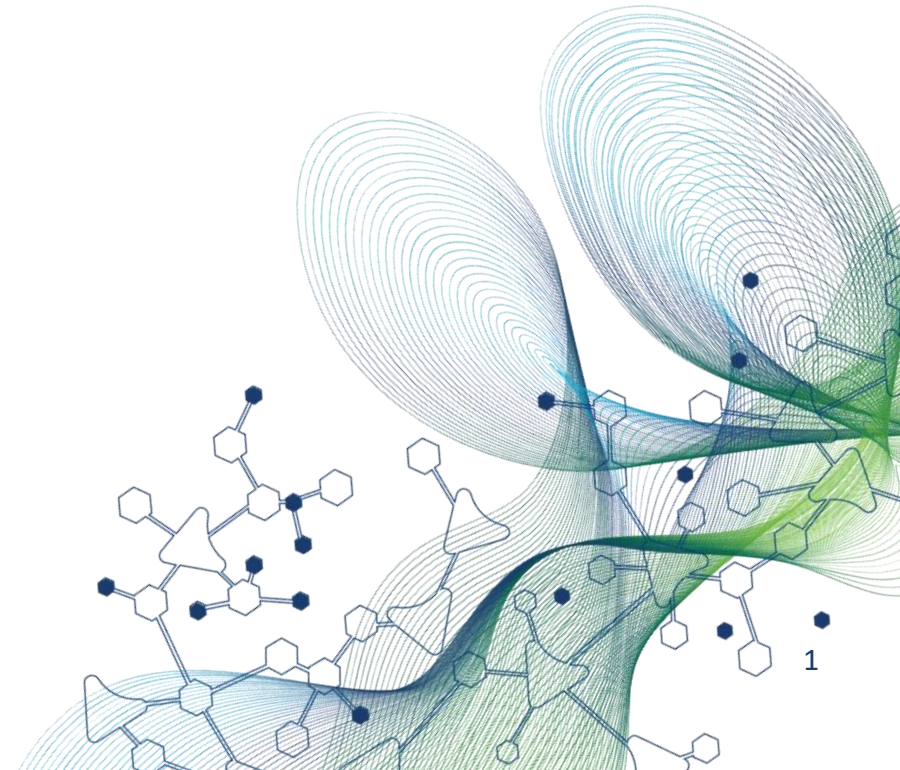


Digital Innovation in Clean Energy (DICE) 3.0 Open Competition

Program Webinar

Bruce Duong, Senior Manager, Digital and Recovery Technologies

December 11, 2023



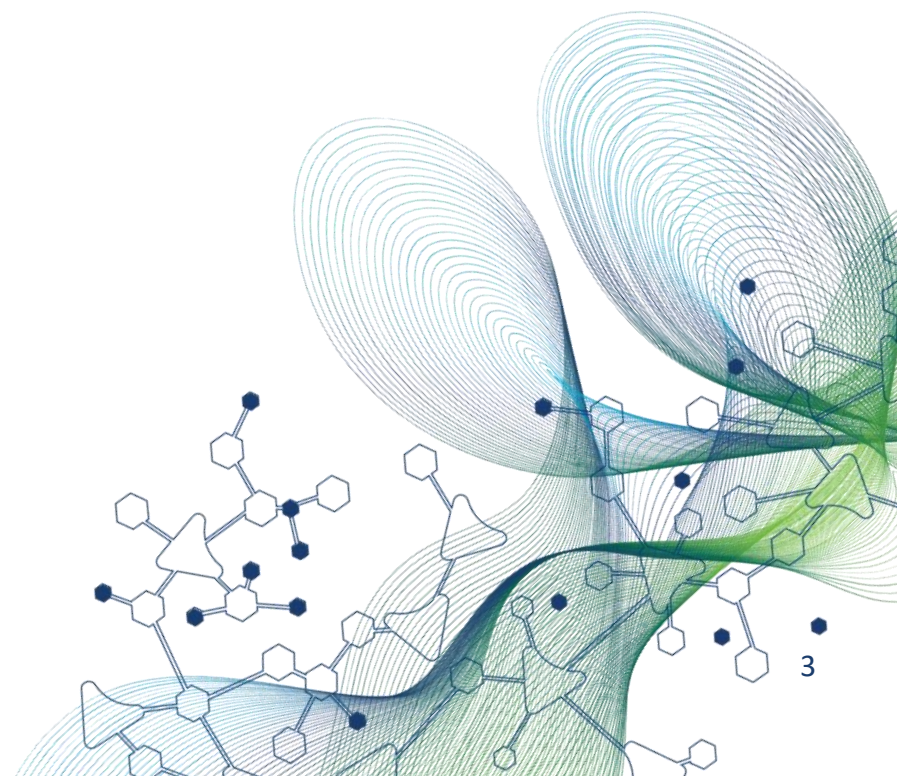
Agenda

1. Housekeeping
2. Alberta Innovates Context
3. Digital Innovation in Clean Energy 3.0
4. Project Targets and Considerations
5. Applicant Eligibility
6. Submission Process
7. FAQs
8. Q&A

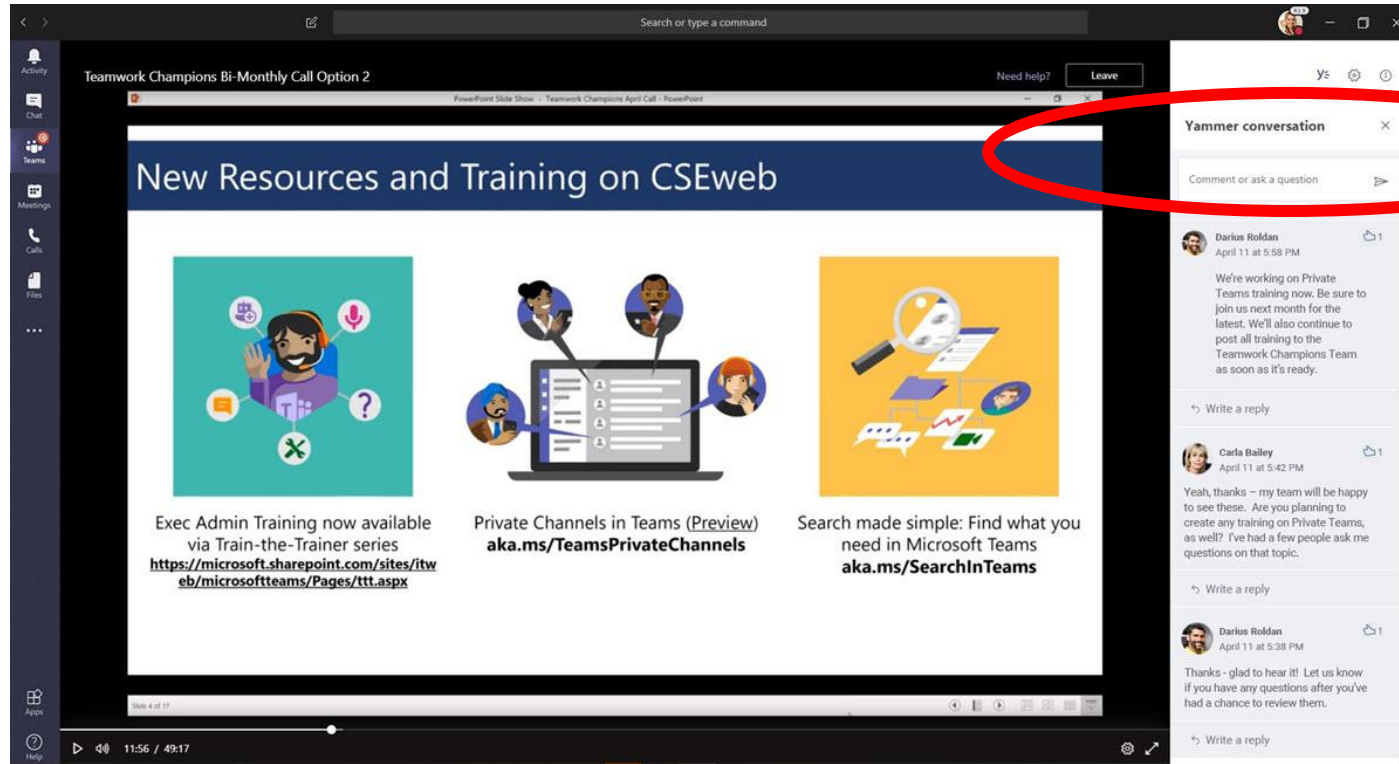
Housekeeping

The presentation and Q&A will be recorded and posted on the DICE program website within 24 hours of the end of the webinar.

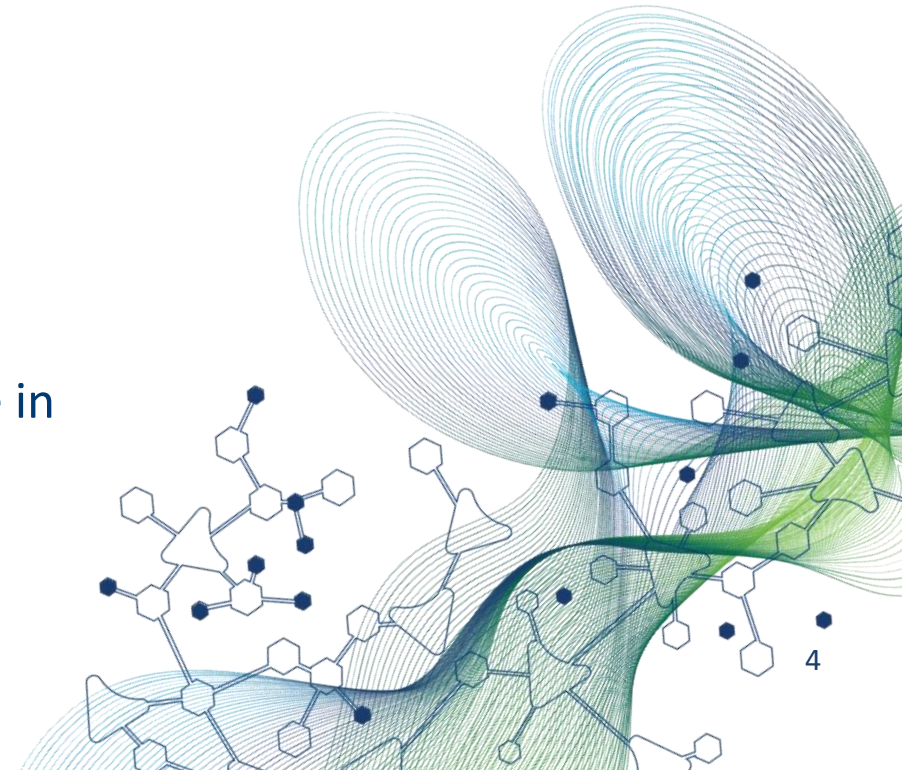
- Microphones are muted, you are only able to listen to the audio and view the presentation.
- All questions are typed in the message box, directly under the “ask the moderator” section.
- Please ask your questions or vote up questions that may be repeated.
- Questions will be answered and recorded in the Q&A portion of the presentation.



Housekeeping

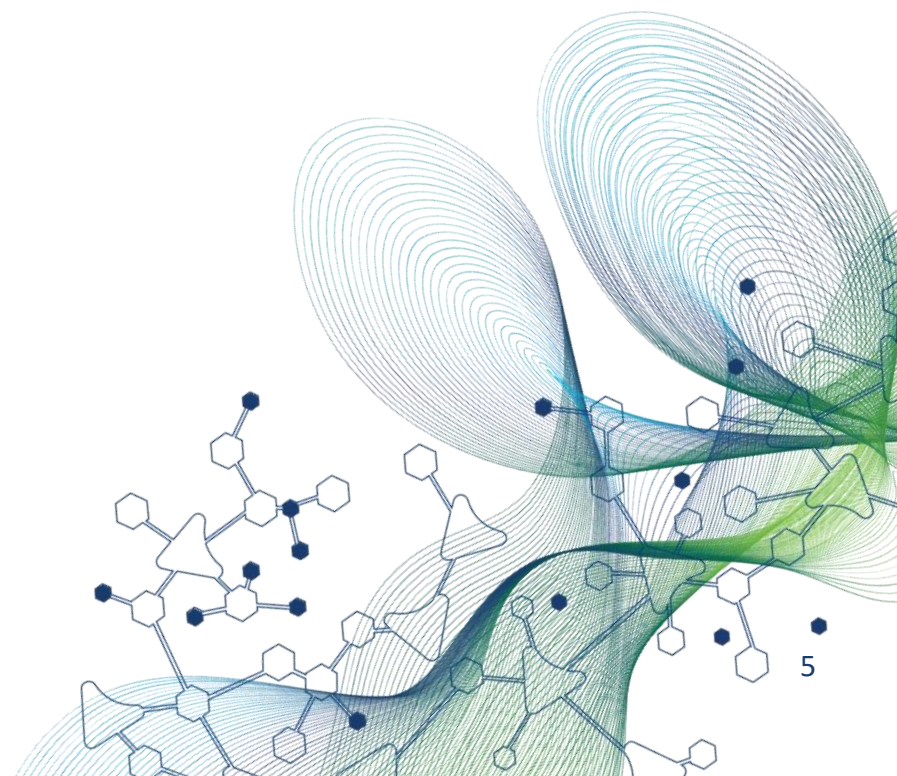


- Click on the message box located at the top right corner and type in your question
- Hit enter or arrow icon to send question



Land Acknowledgement

We acknowledge the many First Nations, Métis and Inuit who have lived in and cared for these lands for generations. We are grateful for the traditional Knowledge Keepers and Elders who are still with us today and those who have gone before us. Alberta Innovates respectfully acknowledges that we are situated on traditional territory of the Treaty 6, Treaty 7, and Treaty 8 First Nations; home to Métis Settlements, the Métis Nation of Alberta, and Regions 2, 3 and 4 within the historical Northwest Métis Homeland. We respect the histories, languages, and cultures of First Nations, Métis, and Inuit whose presence continues to enrich our vibrant community.



Equity – Diversity – Inclusivity

We believe the Alberta Research and Innovation (R&I) ecosystem is stronger and more sustainable when it is broadly representative of the overall diversity of our community.

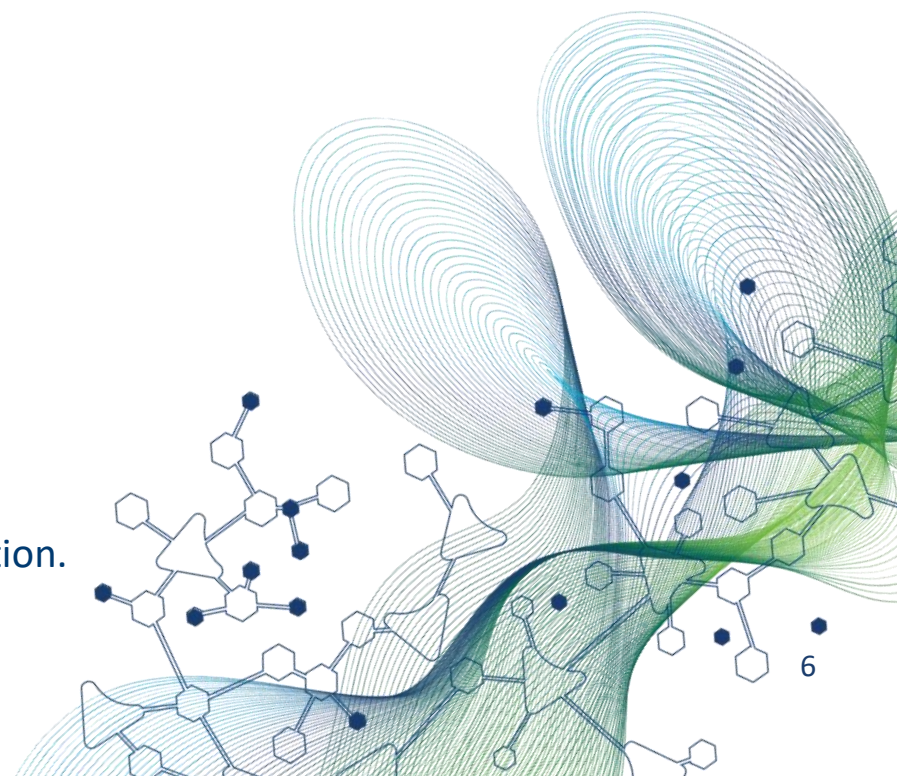
We strive to ensure that all interested and qualified parties have an equitable opportunity to participate and contribute to the ecosystem and that our processes are inclusive.

Historically, there have been several groups/populations that have been under-represented in the R&I landscape including:

- Women entrepreneurs/researchers
- Indigenous entrepreneurs/researchers
- Remote/small community entrepreneurs/researchers
- New immigrant entrepreneurs/researchers

We encourage ALL entrepreneurs/researchers to apply!

If you are a first time AI applicant, don't hesitate to reach out for navigation information.



ABOUT US



11 Locations
1 million+ sq ft
of lab space
600+ acres of
research
farmland



Employees
589 FTEs
Including 70+
PhDs



2 Subsidiaries
InnoTech Alberta Inc.
C-FER Technologies
(1999) Inc.



Operating
Budget
\$250 million



Value of our PORTFOLIO



1,280 projects across business
lines and sectors

Total portfolio value

\$1.33 billion

in 2022-23

Alberta Innovates is driving innovation to build
a bright future for all Albertans.



1,582

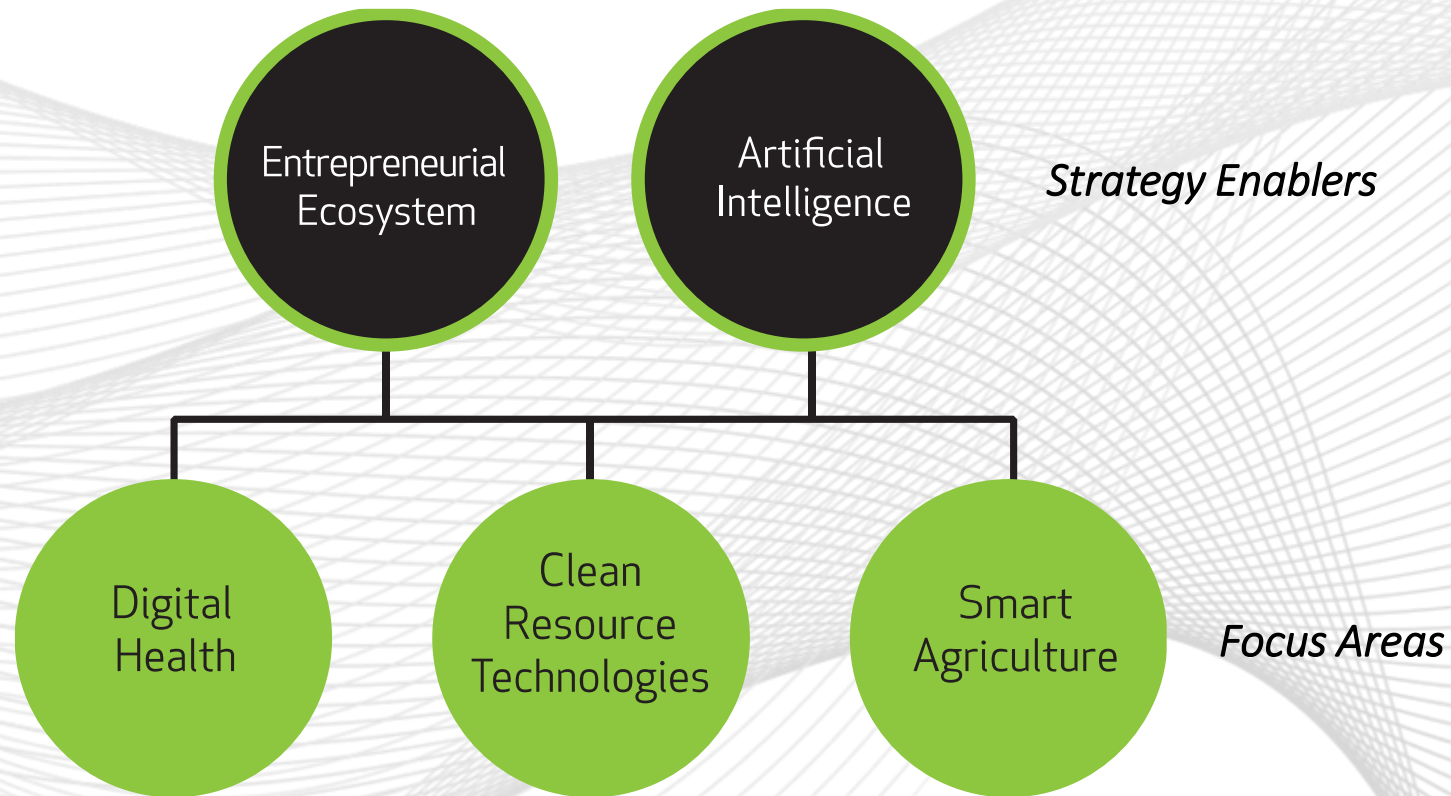
*Clients supported
by Alberta Innovates
(students/trainees, researchers,
companies, entrepreneurs and others)*

596

*Clients supported by
C-FER Technologies
and InnoTech Alberta*

OUR INNOVATION PRIORITIES

Five bold bets with provincial upside



Digital Innovation in Clean Energy (DICE)

Program Objectives

- Advancing technologies that benefit Alberta industry or public sector
- Funding novel technologies with the potential to achieve clean energy impacts, economic diversification, and employment opportunities
- Recruiting and developing highly skilled personnel to support the digital economy in Alberta

ATIS 2030 Innovation Targets:

- Energy, minerals and clean-tech
 - Technologies to optimize effective and efficient resource extraction and processing
- Emerging technologies
 - Advancing commercialization opportunities in areas of existing strength, including artificial intelligence, machine learning and quantum science
 - Developing technologies to increase productivity, improve efficiency, reduce environmental impact, and achieve a low-carbon future

Digital Innovation in Clean Energy (DICE)

Alberta Innovates is announcing a new round of funding under its Digital Innovation in Clean Energy (DICE) program. \$2.5 million in funding from Alberta Innovates is available, with up to \$250,000 available per project.

DICE funds the development of:

- Artificial intelligence, machine learning, industrial internet of things, augmented reality, and unmanned aerial vehicle technologies for use in Canada's energy and cleantech industry.

DICE projects will:

- Develop technologies and accelerate them into market, improving the efficiency of energy production, reducing greenhouse gas (GHG) emissions, creating jobs in the digital economy, and contributing to environmental innovations in water and land management.

Digital Innovation in Clean Energy (DICE)

Examples of previously funded projects in DICE include:

- Edmonton-based NTWIST is applying artificial intelligence for industrial process optimization and automation to help major resource producers reduce costs and environmental impacts. Full story [here](#).
- Galatea Technologies is creating a “Waste Coordinator” platform to increase workflow transparency, cost accuracy and provide actionable insights into the \$4 billion Canadian waste disposal market. Full story [here](#).
- Validere is using advanced analytics and machine learning based platform to measure emission reductions and produce actionable insights for buyers, sellers, and transporters of petroleum products, while improving operations efficiency and trading profits. Full story [here](#).

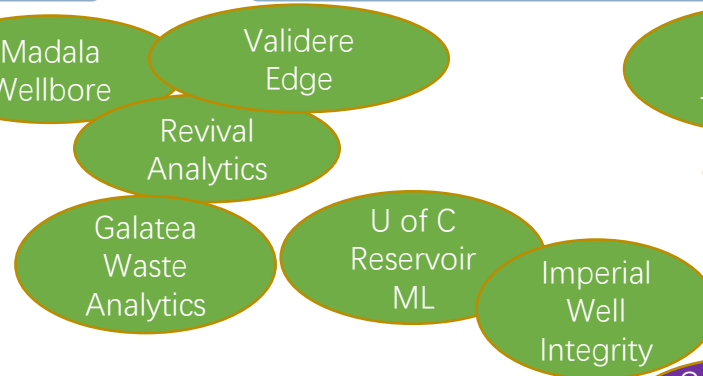
Completed Projects



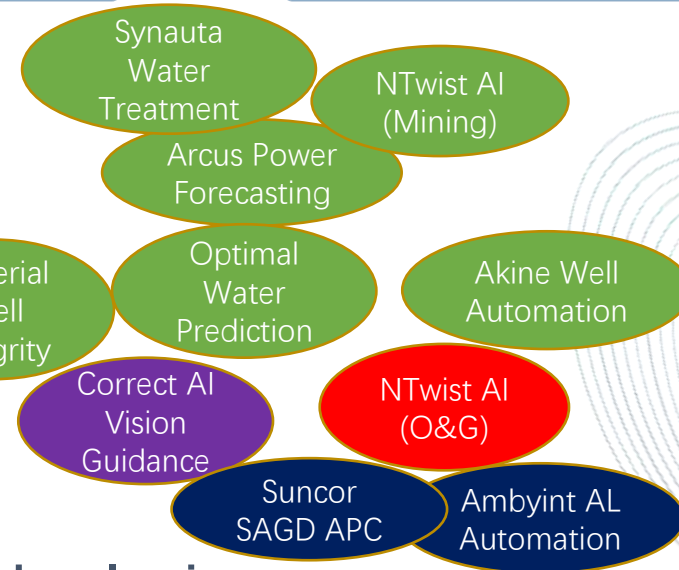
Internet of Things



Machine Learning



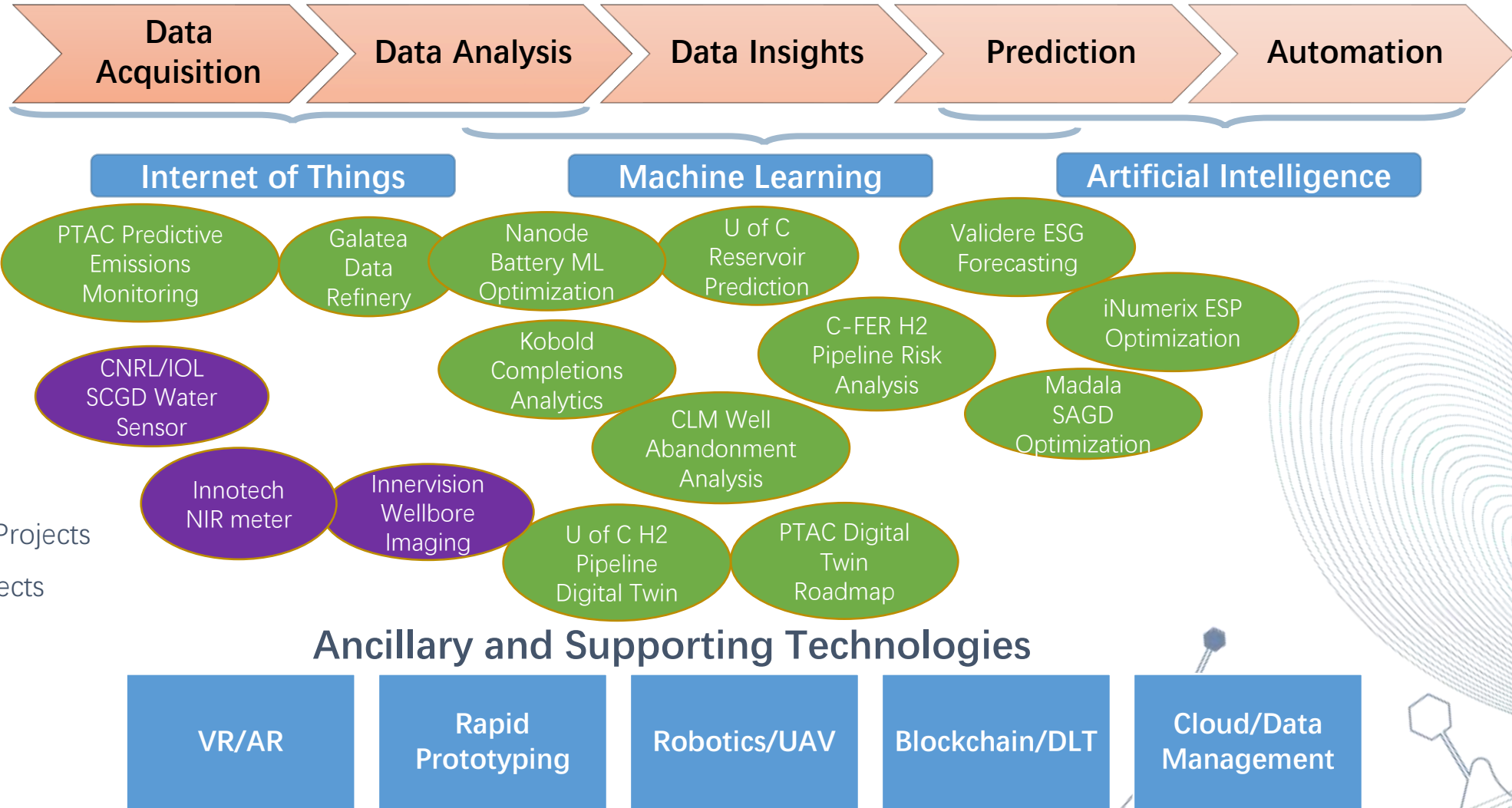
Artificial Intelligence



Ancillary and Supporting Technologies



Current Projects



DICE 3.0 Timeline

Date	Planned Activity (dates subject to change at AI's discretion)
November 29, 2023	Launch of open call
December 11, 2023	Webinar (via videoconference)
February 1, 2024	Close of proposal submissions 3:00 PM MST
May 1, 2024	Announcement of funded projects
November 1, 2025	Latest completion date for funded projects

Project Targets and Considerations

Proposed solutions should be within a TSRL range of 3-7 at the beginning of the project

- **TSRL 1-3: Research and solution validation:** Research is primarily done in the lab and ranges from fundamental research to proof of concept in a lab setting. Theory and scientific principles are focused on knowledge and application to define the concept. A potential business model is outlined, with problem and solution validation required. A market and competitive analysis is performed to align the proposed solution with the market need.
- **TSRL 4-6: Development:** The basic technological components are integrated for testing in a simulated environment and include alpha testing of prototypes. Knowledge and operational practices (e.g., best management practices) are tested at small scales in the field. A roadmap for the solution's technical requirements is developed to complete a demonstration of design prototypes in specific applications.
- **TSRL 7: Field Pilot:** The prototype is tested in the field in an operational environment and is well integrated with other systems. The proposed solution package is tested by end-users to validate performance and integration.
- **TSRL 8-9: Demonstration:** The technology is scaled up and tested in its final form and under expected conditions. The solution has been developed to the stage of a minimum viable product, validating the proposed business model and confirming market applicability.

Project Targets and Considerations

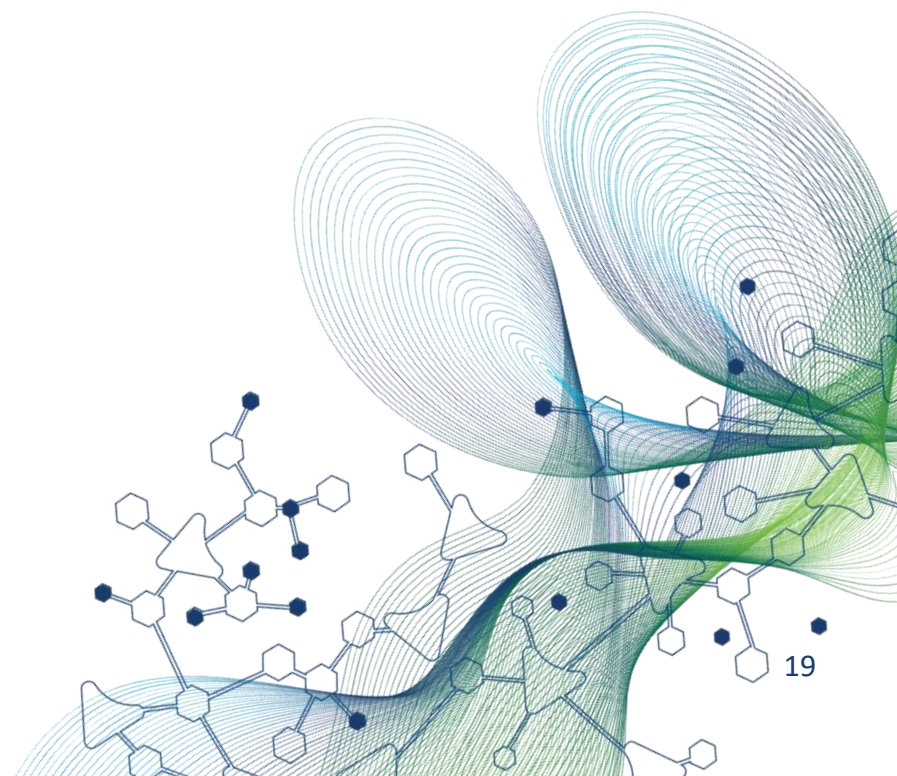
Clean Resources Focus Areas

Advanced Hydrocarbons	Clean Technology	Environmental Innovation
Production optimization and yield improvements	Smartgrid, distributed generation, and renewable energy management and control	Water treatment and management
Operational efficiency improvements, improved economic efficiencies	Integration of energy storage and renewable energy	Land and biodiversity monitoring
Integrated operations solutions	Innovations related to contracts and settlements	Tailings management
Emissions reductions and environmental performance	Transportation system management and control	Management of environmental monitoring and public health
Project execution, operational health and safety	Green buildings technologies	

Project Targets and Considerations

Development of project technologies should be able to either show direct measurable benefits or to reasonably quantify enabled/indirect benefits in at least one of the following areas:

- Cost reduction
- Increasing competitiveness
- Development of HQP
- GHG emission reductions
- Water, land environmental impacts; clean air, water, and soil
- Company creation and new product development
- Economic diversification



Project Targets and Considerations

Proposal Application Evaluation Criteria

The Innovation	Project Management	Impacts and Outcomes
Innovation Opportunity	Work Plan, Tasks, and Deliverables	Economic Impacts to Alberta
Market Opportunity and Competitive Analysis	Budget and Funding Commitment	Environmental Impacts
Proposed Commercialization Pathway	Project Team	Social Impacts
	Risk Analysis and Mitigation	

Project Targets and Considerations

Proposal Application Evaluation Criteria

Optional attachments:

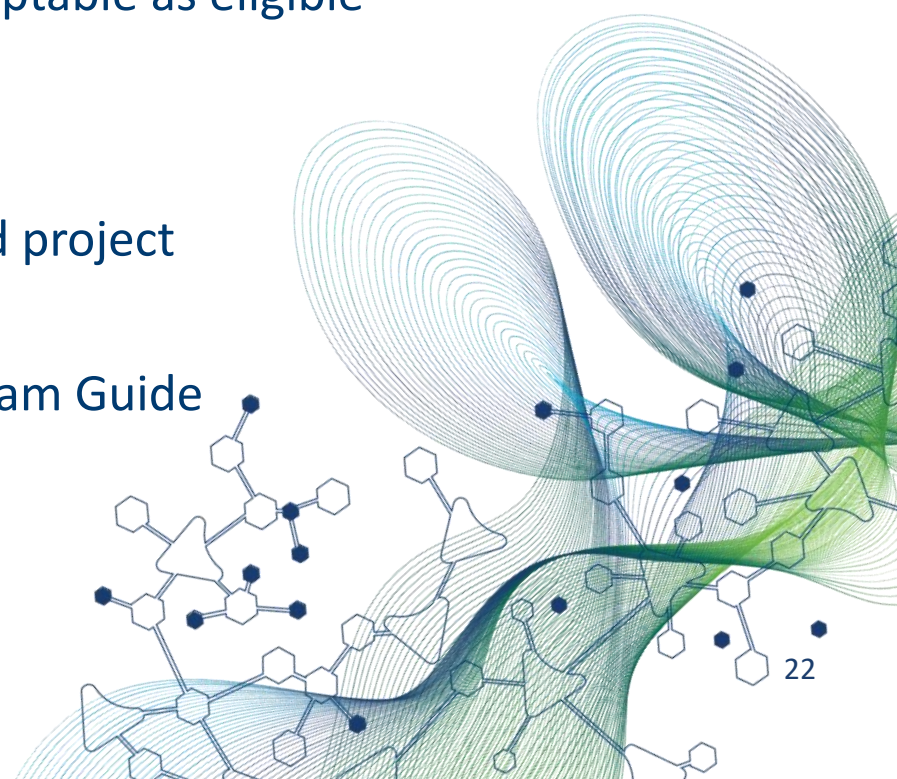
- Business Plan
- Funding Sources
- Financial Statements

Only information entered in the proposal template is mandatory – attachments can be referenced, but please be concise and to the point in the main proposal sections!

Applicant Eligibility

Project funding can be up to, but not exceeding \$250,000 per project

- Program normally supports up to 50% of total project costs (cash plus in-kind) with the balance of funding from other project partners
- Other public funding sources (NSERC, SDTC, NRCan, etc.) are acceptable as eligible partner funding – no stacking limit with other public funding
- All projects must be completed before November 1, 2025
- Funding is disbursed on an initial project approval, milestone, and project completion basis for successful applicants
- A summary of eligible and ineligible costs is available in the Program Guide



Applicant Eligibility

The DICE Program is open to:

- Technology developers, industry, industrial associations, small and medium-sized enterprises, research and development (R&D) organizations, post-secondary institutions, municipalities, not-for-profit organizations, and government research labs, providing they are legally able to execute the Investment Agreement.
- Applicants are not required to be based in Alberta but must demonstrate a clear value proposition for the province.

Collaboration with other project partners is highly encouraged. Consideration will be given during the review process for projects demonstrating end user engagement and formal partnerships.

Applicant Eligibility

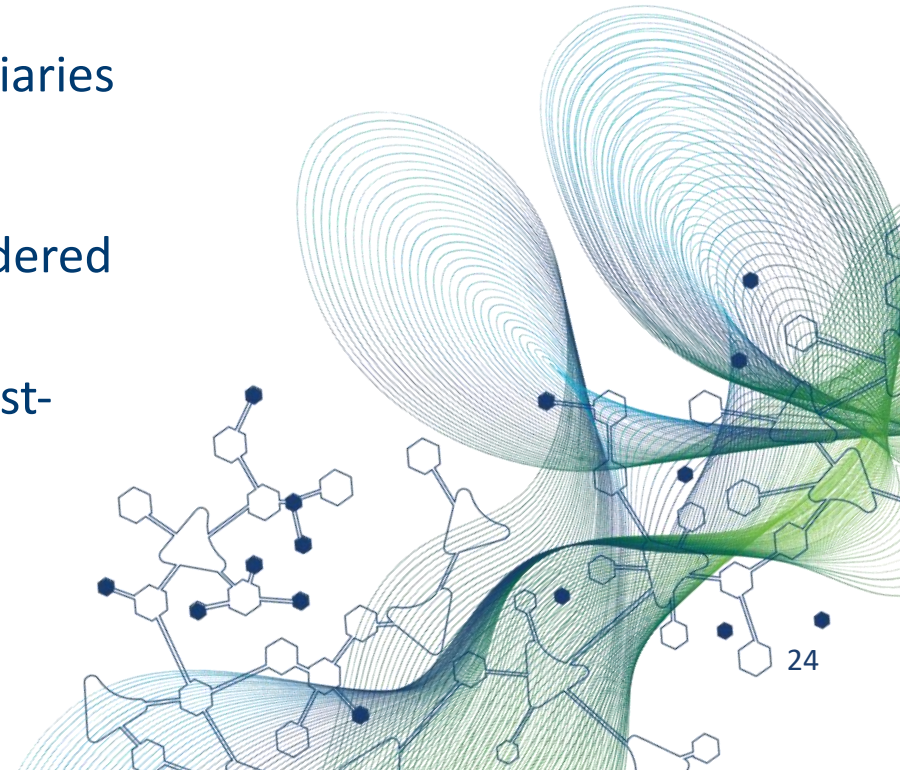
If you're not sure of your eligibility, ask!

Partner(s) is (are) required to satisfy the following criteria:

- Demonstrate a need or potential for use by Alberta Industry
- No conflict of interest between the Applicant and Partner(s)
- Have no outstanding balances to Alberta Innovates or subsidiaries

Additional Considerations:

- Federal funding agencies (e.g. NSERC, NRCan, etc.) are considered eligible project partners
- An industry partner is recommended but not required for post-secondary institution applicants



Submission Process

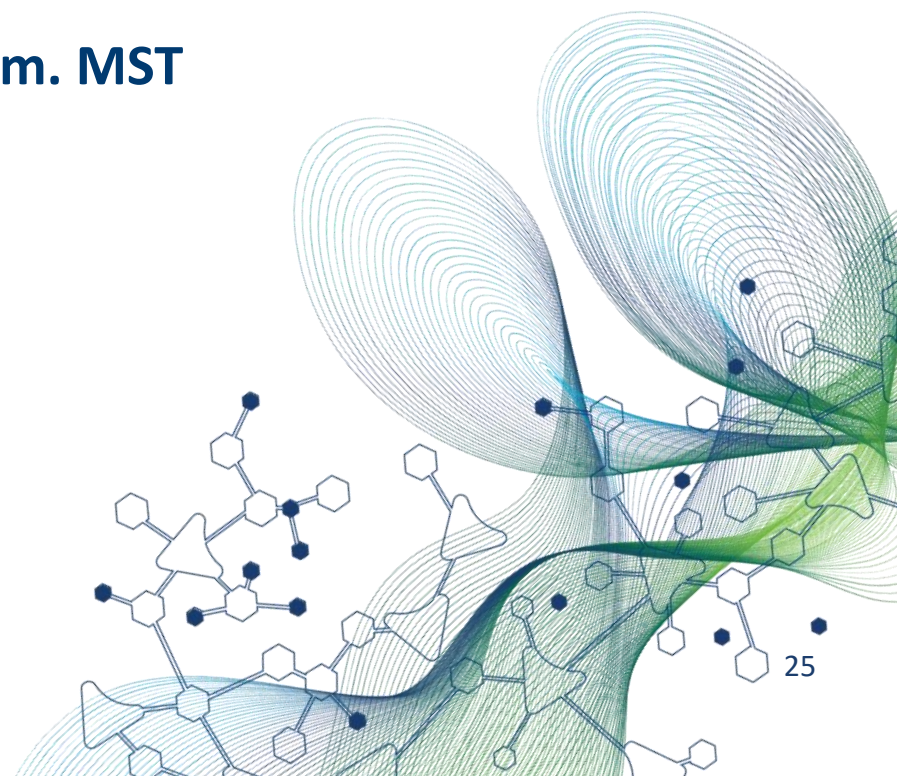
Online Portal Instructions

Step 1: Register as an applicant on SmartSimple: <https://albertainnovates.smartsimple.ca>

Step 2: Select the correct competition: Digital Innovation in Clean Energy : DICE 3.0

Step 3: Complete the single-stage application online, including attachments

Step 4: Submit before the deadline: **February 1, 2024: 3:00 p.m. MST**



Submission Process

Online Portal Instructions

Step 1: Register as an applicant on SmartSimple: <https://albertainnovates.smartsimple.ca>

A screenshot of the SmartSimple login and registration page. The page has a dark background with a blurred image of green leaves. On the left, there is a "Login" section with an "Email" input field, a "Password" input field with a magnifying glass icon, and a blue "Login" button. Below the login fields, there is a link "Forgot Password?". On the right, there is a "Welcome" section with text about challenges and growth. At the bottom left, the text "New to the System?" is circled in red, with a blue "Register" button directly below it.

Organization Information

Instruction

Complete the fields below to complete your registration. Use the below lookup field to find your organization if it has already been registered in our system.

If you cannot find your organization in the box below, please click [here](#).

* Legal Name

Organization

If you select a company from the search above, please navigate to the Organization page after registration and verify that all of the information is up-to-date and complete.

Contact Information

* First Name

* Last Name

Title/Position

* Work Email

Submission Process

Online Portal Instructions

Step 2: Select the correct competition: Digital Innovation in Clean Energy: DICE 3.0


Welcome Bruce Duong

Organization Profile

Personal Profile

Change Password

Applications
Click here to view all of your applications.


Funding Opportunities

0
Draft Applications



0
Submitted Applications

0
Approved/Declined Applications

Funding Opportunities

**** Please ensure you have read the Program Guide for the Program you are applying for, and that you meet the eligibility requirements of the Program, prior to starting your Application. ****

NOTE: Unsubmitted Applications to Continuous Intake Programs (i.e. Programs with no Competition Deadline) will be automatically deleted if not modified in 90 days. Unsubmitted Applications to Program Calls will be automatically deleted in 30 days after the Competition Deadline.

 1-13 of 13  

Program Name	Competition Name	Competition Deadline	Program Guide	Program Home Page	
Agri-Food and Bio-Industrial Innovation Program	Agri-Food and Bio-Industrial Innovation Program Competition		Link	Link	Apply Now
AICE Market Access/Validate Intake Form	AICE Market Access/Validate Intake Form			Link	Apply Now
Clean Resources Continuous Intake Program	Clean Resources Continuous Intake Program			Link	Apply Now
Digital Innovation in Clean Energy	DICE 3.0 - November 2023	01/02/2024 15:00		Link	Apply Now

Submission Process

Online Portal Instructions

Step 3: Complete the single-stage application online, including attachments.

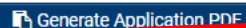
SAVE DRAFT FREQUENTLY ON SMARTSIMPLE!

2324

Grants Coordinator: Tausha Polowy


Program Name: DICE

Cycle Name: DICE 3.0 - November 2023



[INSTRUCTIONS AND DISCLAIMER](#) [APPLICANT INFORMATION](#) [REPRESENTATIVE INFORMATION](#) [NON-CONFIDENTIAL SUMMARY](#) [INNOVATION OPPORTUNITY](#) [MARKET OPPORTUNITY](#) [PROPOSED COMMERCIALIZATION PATHWAY](#) [PROJECT OVERVIEW](#) [PROJECT WORKPLAN](#)

 NOTE: The red * before a question indicates that it is mandatory for submission.

 **Instructions and Disclaimer**
This Application form collects pertinent information about the Investment being requested. This enables Alberta Innovates to assess the merits of the proposed Application and its fit with our strategic priorities and corporate goals. The Applicant must complete the Application in its entirety. Applicants that fail to complete all mandatory sections may not be considered. It is essential that you read and understand the Program Guide before completing this Application. All capitalized words or terms which are not defined within this Application have the respective meaning as set out in the Program Guide or Investment Agreement. In this Application, the term "you" and "Applicant" are used interchangeably.

To complete this Application, move from left to right through the tabs above. If you require assistance in completing your Application, please contact the Alberta Innovates' representative listed in the Program Guide. If you are unsure who to contact, please email: inbox_grants@albertainnovates.ca.

Submission Process

Online Portal Instructions

Step 4: Submit before the deadline: **February 1, 2024: 3:00 p.m. MST**

OPPORTUNITY MARKET OPPORTUNITY PROPOSED COMMERCIALIZATION PATHWAY PROJECT OVERVIEW PROJECT WORKPLAN, BUDGET AND TEAM PROJECT RISK ANALYSIS

Please Note: unless otherwise noted, the only files that can be uploaded are of the PDF file format. Please convert your files to PDF before uploading. PDFs may be combined prior to uploading, to reduce t

*** Alberta Innovates Work Plan and Budget Workbook:**

Please refer to the Project Work Plan, Budget and Team tab before uploading. Please upload as an excel document.

Supporting Documents Referenced in the Application:

Upload any documents that are referenced in the Application.

*** Resumes/CVs of Key Team Members:**

Please refer to the information in the Project Work Plan, Budget and Team section before uploading.

Letters of Support:

Please refer to the information in the Project Work Plan, Budget and Team section before uploading.

Drop files here or [browse files](#)

Maximum file size: 2 GB | Allowed file types: PDF, PDF

BACK

Save Draft Submit Application Withdraw Application

FAQ

Advice for preparing a successful submission

- Read the Program Guide
- Use clear and concise language
- Define what problem you are trying to solve
- Position your proposal relative to competing technologies
- Address each question in the application and read the question guidance carefully
- **SAVE DRAFT FREQUENTLY ON SMARTSIMPLE!**
- **DON'T WAIT UNTIL THE LAST DAY(S) TO SUBMIT!**



FAQ

- What types of organizations are eligible?
- Can projects or funding occur outside the province?
- What are examples of “industry” partners?
- What costs are eligible for matching funding?
- Is there a minimum funding request?

For additional specific questions regarding this program please contact:

Bruce Duong, Senior Manager, Recovery Technologies:
bruce.duong@albertainnovates.ca



Questions

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THANK YOU

