



**FORESIGHT** **50**

Canada's Most Investable Cleantech Ventures

2022 Pitchbook

# From Our CEO

I am extremely proud to introduce the 2nd annual Foresight 50, recognizing Canada's most investable cleantech ventures of 2022. From coast to coast and spanning a range of sectors, these companies are developing the critical cleantech solutions that are accelerating the global net zero transition.

At Foresight, we know that Canada has no shortage of inspiring innovators with the potential to solve global climate challenges. So far, through our Acceleration programs, we have helped nearly 900 Canadian innovators launch and scale their cleantech ventures. But these companies struggle to attract the long-term capital and recognition needed to make their businesses competitive on a global scale.

Foresight 50 shines a light on Canada's most promising cleantech ventures while directly connecting these ventures with investors, customers, and partners. By fostering these relationships, our Foresight 50 companies are able to raise more capital and scale their climate solutions faster. Last year's Foresight 50 companies went on to collectively raise \$593M to help propel their cleantech solutions forward — we can't wait to see what's possible for this year's companies as they lead Canada towards our audacious goal of being the first G7 country to reach net zero.

On behalf of Foresight, I am pleased to extend our sincere appreciation to our friends and partners who lent their support, knowledge, and expertise to make this year's Foresight 50 possible. Thank you — Gowling WLG, BDC's Climate Tech Fund II, the Canada's Clean50 Awards Program, Copoint, Invest Vancouver, Platform Calgary, Simon Fraser University, Vancity Community Investment Bank, and the National Research Council of Canada Industrial Research Assistance Program (NRC IRAP) — for your support.

Congratulations to the 2022 Foresight 50. Your dedication to solving the world's most pressing climate issues is truly inspiring. We can't wait to see what you and your teams will accomplish as your companies continue to grow.

**Jeanette Jackson**  
CEO, Foresight Canada

## ABOUT THE FORESIGHT 50

Foresight has selected the Foresight 50 after an extensive consultation process with partners across the country.

An open call for nominations took place from August 16 to October 2, attracted over 150 nominations. After an expert review of nominated ventures by an internal panel of Foresight Executives in Residence and mentors, 83 companies advanced as finalists for judging.

Our 29 judges, representing investors and cleantech community partners, evaluated detailed profiles of the companies on criteria including investability, potential environmental and employment impact, and probability of success.

The Foresight 50 represent hope for our future. These ventures will be interesting to impact investors, funding organizations, potential industry customers, and talented Canadians seeking meaningful employment. We encourage you to connect with Foresight 50 companies to explore investment and partnership opportunities.



# Thank You to Our Partners

Gowling WLG is thrilled to be supporting the Foresight 50, and we're even more pleased to extend heartfelt congratulations to the winners.

In Canada, the private sector is and will remain critical to solving looming environmental problems. We know just how important IP protection is to attracting and retaining investments so this work can continue unencumbered. We're honoured to already be assisting some of the world's premier cleantech players, many of whom are pushing bold new innovations from right here in our own backyard. These businesses are working on everything from developing vertical farms to advancing wastewater treatment, preventing pipeline leaks, implementing new solar energy technologies, and achieving unprecedented global emissions targets. Without a doubt, they are striving to create a better future for all of us.

When it comes to increasing profitability and protecting your clean technology, having the right IP counsel on hand can make all the difference. With IP professionals located across Canada and internationally, our firm has the experience and business acumen necessary for safeguarding your cleantech innovation, both at home and abroad.

Interested in learning more? Contact any member of our team to discuss how Gowling WLG can assist with your cleantech IP needs at every stage of the business lifecycle, including research and development, growth and scale-up, market expansion, and resource maturity.

Congratulations again to each and every one of this year's winners. Keep up the good work.

## Roch Ripley

Partner, Head of Vancouver IP Department  
Gowling WLG

Invest Vancouver is pleased to support Foresight 50, hosted in a region well on its way to a cleaner future.

As Metro Vancouver's economic development leadership organization, Invest Vancouver is committed to promoting the region on a global stage to attract the right type of investment. As part of our strategy, we are devoted to the success and future of the Canadian cleantech sector.

The world urgently needs more resilient and efficient technologies to address pressing climate issues. The cleantech sector provides an incredible opportunity for our region to be a leader in propelling emerging ventures towards accessible, vital and market-ready solutions.

The Metro Vancouver region has been able to unlock that potential in this sector through decades of green policy, a commitment to being carbon neutral by 2050, and a remarkable cluster of talent.

To add to this, our region includes a robust innovation ecosystem with strong ties to research universities, institutions, along with a mix of incubators, entrepreneurship programs and accelerators.

But the work is never done, and we focus on continuously positioning the Metro Vancouver region for success in a rapidly evolving economy supported by strategic investment attraction, regional collaboration and policy analysis.

We give heartfelt congratulations to the winners today and to Foresight for their leadership.

## Jacque Griffiths

President  
Invest Vancouver



Foresight would also like to thank the National Research Council of Canada Industrial Research Assistance Program (NRC IRAP), for providing funding support for its Cleantech Ventures program, part of which makes this initiative possible.



National Research  
Council Canada

Conseil national de  
recherches Canada

# Judging Panel

The Foresight 50 were selected by a panel of industry experts and investors who reviewed detailed information provided by nominated ventures. Thank you to our judges for lending their time and expertise.



**Andrew Wong**  
Associate Director,  
TIREC



**Basma Majerbi**  
Associate Professor,  
Gustavson School of  
Business, UVic



**Cheri Corbett**  
Senior Partner, Capital –  
Climate Tech Fund, BDC



**Danielle Graham**  
General Partner, Phoenix  
Fire and Co-Founder of The  
Firehood, Arch Angel Network/  
Phoenix Fire



**Darren Love**  
Associate, Evok Innovations



**David Weekes**  
Associate, Pangaea



**Ehsan Mirdamadi**  
CEO at Nubinary, Active Angel  
Investor and a GP at ArchAngel  
– Axion fund, Arch Angel  
Network



**Elliot Cudmore**  
Executive VP, Copoint



**Finlay McNab**  
SFU Innovates Fellow, SFU



**Jeff Coles**  
Partner, Gowling WLG



**Jonathan Kaida**  
Global Trade Director –  
Cleantech, EDC



**Kookai Chaimahawong**  
ESG Partner, UpperStage.Capital





**Mark Wilke**  
Partner, Gowling WLG



**Megan Wery**  
Senior Associate, Amplify Capital



**Michael Bosdet**  
President, Copoint



**Nate Lowbeer-Lewis**  
VP, Canada,  
Springlane Capital



**Olga Cruz**  
Senior Associate, Good & Well



**Roch Ripley**  
Partner, Gowling WLG



**Sarah Applebaum**  
Partner, Pangaea



**Sarthak Gupta**  
Senior Advisor, Keiki Capital  
Angel Investor, E8 Angels



**Seif Belhani**  
Partner, Climate, Amplify Capital



**Shirley Speakman**  
Senior Partner, Cycle Capital



**Shivani Chitroda**  
Associate, inBC Investment



**Simon Olivier**  
Senior Partner, Lead  
BleuImpact Fund,  
Cycle Capital



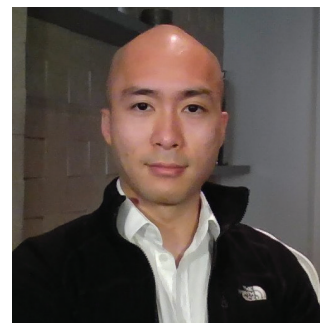
**Sophie Endl**  
Principal, Active Impact  
Investments



**Sorin Rizeanu**  
Assistant Professor, Gustavson  
School of Business, Uvic



**Tim Bailey**  
Partner, Gowling WLG



**Yifei Wang**  
Investor & Lead Analyst,  
Little Green Bamboo



## Review Committee

The Foresight 50 were selected by a panel of industry experts. Our sincere thanks to Foresight Executives in Residence James Chepya, Maria de la Puente, James Freeman, Tejas Kashyap, Frank Leffelaar, and Alexander Rink for their help reviewing the nominees.

## Join Foresight's Investor Network

In addition to the Foresight 50, we also provide company introductions on an individual basis to interested investors. To get curated introductions from Foresight, complete an investor onboarding profile to connect with Canadian cleantech companies who meet your investment thesis.

[\*\*Join Today\*\*](#)

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The information in this pitchbook was collected between September and November 2022, and therefore some information may have been updated since then. For the most up-to-date venture investment information, please contact the ventures directly.

**NO INVESTMENT ADVICE:** The content provided is for informational purposes only, you should not construe any such information or other material as legal, tax, investment, financial, or other advice. Nothing contained herein constitutes a solicitation, recommendation, endorsement, or offer by Foresight or any third party service provider to buy or sell any securities or other financial instruments in this or in any other jurisdiction in which such solicitation or offer would be unlawful under the securities laws of such jurisdiction. All content is information of a general nature and does not address the circumstances of any particular individual or entity. You alone assume the sole responsibility of evaluating the merits and risks associated with the use of any information or other content provided herein before making any decisions based on such information or other content.

# Meet the Foresight 50

[Adaptis](#)

[Agora Energy Technologies](#)

[Axine Water Technologies Inc.](#)

[Bio Graphene Solutions](#)

[Carbin Minerals](#)

[Carbon Upcycling Technologies](#)

[CarboNet](#)

[CarbonGraph](#)

[Copperstone Technologies Ltd.](#)

[Cvictus Inc.](#)

[Digital Water Solutions Inc.](#)

[Earthware](#)

[Ekona Power Inc.](#)

[Farment](#)

[FREDsense Technologies](#)

[Galatea Technologies Inc.](#)

[GRT](#)

[Hempalta Inc.](#)

[Highwood Emissions Management](#)

[HTEC](#)

[Hydra Energy](#)

[Intelligent City](#)

[Klean Industries Inc](#)

[Korotu Technology Inc.](#)

[LightLeaf Solar Ltd.](#)

[Livestock Water Recycling](#)

[LlamaZOO](#)

[Lucent BioSciences](#)

[MarineLabs Data Systems Inc.](#)

[NanosTech](#)

[NULIFE GreenTech](#)

[Nyoka](#)

[Open Ocean Robotics](#)

[OptiSeis Solutions Ltd.](#)

[Permalution](#)

[Planetary Technologies](#)

[Proteus Waters](#)

[Psigryph Inc.](#)

[SeeO2 Energy](#)

[SolarSteam Inc.](#)

[Summit Nanotech](#)

[Swift Charge](#)

[Swirltex Inc.](#)

[Takachar](#)

[TechBrew Robotics Inc.](#)

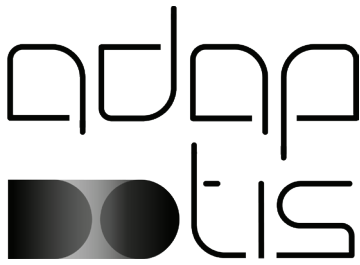
[Terramera, Inc.](#)

[TheoryMesh](#)

[Verdi](#)

[Viridis Research](#)

[ZILA Works](#)



# Adaptis

## The Digital Energy Platform

Adaptis is a decision-support software solution for optimal decarbonization planning of existing buildings, as part of renovations, retrofits, and adaptive reuse, and circularity planning in new construction scopes. They use AI-powered technologies enabling building owners, architects, and engineers to make informed decisions for decarbonizing buildings and lowering the costs of planning. Their platform first analyzes existing building conditions, then generates automated adaptation feasibility design options, and material recovery and deconstruction scenarios. Lastly, the platform optimizes generated options for environmental and economic performance.

Inefficient use of existing buildings leads to 60% of all demolitions in North America. Demolition waste makes up 25% of all solid waste in landfills, emitting 224 kg of embodied GHG per ton of waste. To meet operational GHG reduction targets, over 80% of existing buildings need to be adapted by 2050. To facilitate any decarbonization or retrofitting project efficiently, a comprehensive existing building assessment and preliminary feasibility study are required. Building adaptation projects and building material reuse planning are complex, involve many stakeholders, and are time-consuming and expensive. By automating and optimizing the planning process, Adaptis provides 50X higher quality design options in 8% of the design and analysis time with 8X lower cost than conventional consultants, increasing accessibility to reduced carbon in all existing buildings.

Adaptis's unique algorithms combine multiple building evaluation factors considering material salvage value and reuse, deconstruction planning, design, environmental, and economic factors. We are accumulating curated data sets of projects that enable our automation and optimization engines.

### **Why our venture should be considered one of Canada's 50 most investable cleantech companies:**

Adaptis is a female-led team of circular engineering experts with over 12 years of professional experience in design and construction. Their innovative cleantech has strong IP and high carbon and cost savings potential. They have strong traction from the industry (\$200K+ in revenue confirmed in the first 6 months). Their waste management and embodied carbon optimization tools are proprietary, patent-pending.

Their intellectual property is focused on unique algorithms and simulation methodologies, as well as curated datasets of existing building simulations. 15,000 tonnes of embodied carbon, 6000 tonnes of waste, 583 MWh of energy, and 740,000 tonnes of operational carbon can be saved over one year, leading to \$38M savings in social cost of carbon alone (assuming use of Adaptis's solutions for 80 buildings in the first year). When scaled, assuming an annual 50M SF of demolition in Canada per year, a potential saving of 750M tons of embodied carbon can be saved annually. Optimizing the material reuse planning will divert up to 60% of demolition waste from landfills.

[Pitch Video](#)

[Website](#)

[BOOK A MEETING](#)

## COMPANY PROFILE

### Target Markets:

- Built Environment

### Leadership:

[Sheida Shahi](#)

### Number of full time employee equivalents:

5 - Toronto, ON

### Acceleration Programs:

CDL Climate, Next Canada (Next Founders), Velocity

### Awards and Recognition:

- CIX top 20 early, 2022

### Non-dilutive Grant Funding:

- NRC IRAP Youth Employment Fund
- I.d.e.a. Fund (FedDev)
- Accelerator Center (FedDev)
- MITACS
- Energy Council of Canada Fellowship
- Discovery Grant NSERC
- University of Waterloo Concept Graduate Fund

### Grant Funding Raised (\$CAD):

\$201,000.00

### Projected Revenues for 2022 (\$CAD):

\$250,000.00

### Planned Equity Raise:

Raising \$1.5-\$2M in Pre-seed for 18-24 month runway





# Agora Energy Technologies

Developing a frontier technology that repurposes CO2 as a raw material for supplying sustainable and abundant clean electricity.

Agora's mission is to push the boundaries of innovation to address the CO2 problem at a scale significant enough to stave off detrimental consequences of climate change.

We start from the indisputable fact that a tremendous amount of energy provided by renewable resources could supply multi-fold humanity's needs. However, these intermittent sources are not dispatchable on-demand. We address this untapped potential by developing a unique, globally patented energy storage technology that goes beyond the mere concept of a grid-scale battery. As such, Agora's technology addresses simultaneously the storage of renewable energy and direct CO2 utilization in one scalable and profitable package. During charging, the battery stores energy by consuming CO2 while during discharging, the battery enables release of large amounts of electricity with the potential of delivering 1 MWh/each tonne of CO2 utilized. This technology could play a key role in the energy transition while also serving major, hard to decarbonize, industrial sectors, where CO2 emissions are generated not only from energy sources but are inherent to the process itself (cement, steel, pulp and paper manufacturing). Developing and scaling such a technology requires a multi-pronged approach at electrochemistry, electro-catalysts, electrode design and stack levels. To date,

Agora's technology has been granted 54 global patents. As a testimony for its team, efforts, and mission Agora was crowned as a winning start-up in multiple competitions on the Canadian and International scene.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

In order to achieve the Net Zero Emissions by 2050 scenario, IEA estimates that the installed grid-scale battery storage capacity must reach a staggering 600GW by 2030. This represents a 25 times increase compared to the 25 GW installed capacity available today (2022). This exponential growth projection in battery storage intersects tightly with associated problems such as supply chain limitations, price increases for critical battery metals and minerals, and significant GHGs emissions related to mining. From 2021 to 2022, the cost of metals in a 60 kWh lithium ion battery increased over 5 times, from \$1,395 to \$7,400. At the latter price point, considering that a grid scale battery could reach hundreds of MWh, the possibility of assuring affordable clean energy is a precarious balancing act. These challenges motivated us to re-think the manner batteries were thought of for the past 150 years and invent a class of non-metal, longduration batteries. Agora's battery, not only has CO2 as a reactant for energy storage but also offers high energy densities approximately three times higher compared to vanadium redox flow batteries, excellent temperature tolerance and high safety levels. The low cost of CO2 as active material, is poised to overcome the supply chain problems at a cost ranging between \$20 to \$150/t capture and purification (2 to 3 orders of magnitude lower than metals used in conventional batteries). Our solution requires breakthrough approaches and we are thrilled that, as a Canadian company, we are at the forefront of innovation internationally.

[Pitch Video](#)

[Website](#)

[in](#)

[BOOK A MEETING](#)

## COMPANY PROFILE

### Target Markets:

- Grid/Power/Utilities
- Heavy Industry (Cement, Steel, Aluminum, Chemicals, Pulp & Paper...)

### Leadership:

[Christina C. Gyenge](#)

### Number of full time employee equivalents:

10 - Vancouver, BC

### Acceleration Programs:

e@UBC

### Awards and Recognition:

- Hello Tomorrow, Paris - Energy Track and the Global Deep Tech Winner (2020)
- Jumpstarter HK and Alibaba Entrepreneurs Fund - Environmental Champion Award (2020)
- The Keeling Prize for Carbon Capture and Utilization (2021)
- Finalist in the Energy Breakthrough Canada (2020) and Impact Canada- Changing the Future (2021)
- Cartier Women Initiative - C.Gyenge for Science and Technology (2021)

### Non-dilutive Grant Funding:

- NRC IRAP
- SR&ED
- NRCan

### Grant Funding Raised (\$CAD):

\$1,779,000.00

### Most Recent Equity Capital Raise completed:

Seed (\$500k-\$2M)

### Dilutive Equity Funding Raised (\$CAD):

\$3,765,120.00

### Investors:

Robert Quartermain, Robert Landucci

### Planned Equity Raise:

Series A funding of \$10M CAD in Q2/Q3 of 2023.



# Axine Water Technologies

Axine treats the toughest organic pollutants in industrial wastewater to eliminate hazardous contaminants in the world's water ecosystem.

Axine has created an advanced, commercially ready system to treat toxic organic pollutants and other emerging contaminants using electro-chemical oxidation. Axine's commercially ready systems are solving global water pollution problems by eliminating pharmaceuticals in the environment (resolving antimicrobial resistance) or eliminating hazardous poly-fluorides (PFAS – the "Forever Chemicals") which are detrimental to human health. Axine builds, owns, operates, and remotely manages water treatment systems anywhere on the globe as a service for the world's leading manufacturers of pharmaceuticals, pesticides, micro-electronics and industrial products. Water pollutants are treated without the addition of any chemical agents, mineralizing them to basic non-hazardous elements.

The applications for Axine products represent an addressable multi-billion annual recurring revenue opportunity for industries with a compelling need to address regulatory and ESG objectives. Axine's water as a service business model provides the guaranteed assurance that customers can meet and exceed both mandated compliance standards and their corporate commitments to environmental stewardship.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

Axine has successfully tackled an extremely difficult electro-chemical technology challenge to create a commercially ready system to address a major global water pollution problem that threatens human health. They have created an innovative business model to provide water treatment as a service, providing guaranteed performance to customers on a fixed fee basis with low technology risk and nominal capital cost. Axine has established viable market entry, earning world-wide master service agreements with two of the major pharmaceutical companies (ranked in the top 20) and is funded by a strong syndicate of institutional investors.

## COMPANY PROFILE

### Target Markets:

- Water

### Leadership:

Greg Peet

### Number of full time employee equivalents:

18 – Vancouver, BC

### Acceleration Programs:

MaRS

### Awards and Recognition:

- Global Cleantech 100
- BlueTech Innovation Tracker
- Cleantech Ready to Rocket
- Technology Impact Award

### Non-dilutive Grant Funding:

- SDTC
- SR&ED
- NRC IRAP
- Innovate BC
- BC-ICE

### Grant Funding Raised (\$CAD):

\$16,900,000.00

### Investors:

Chrysalix, BDC, RODA Group, Asahi Kasei, EDC, VanEdge

### Most Recent Equity Capital Raise completed:

Series A (\$2M-\$20M)

### Dilutive Equity Funding Raised (\$CAD):

\$27,928,000.00

### Projected Revenues for 2022 (\$CAD):

\$1,100,000.00

### Planned Equity Raise:

Series B – \$10M to \$20M



# Bio Graphene Solutions

The cleantech alternative to traditional graphene production.

Bio Graphene Solutions (BGS) is a sustainable manufacturer and supplier of consistent, high-quality graphene from non-graphite source materials via a proprietary thermal-mechanical production process.

We convert 100% organic material (biochar) via an eco-friendly process and manufacture graphene for use across numerous applications – with a primary focus on the concrete and asphalt industries – which as we know are two of the largest contributors to CO2 emissions.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

Our mission is to leverage our unique IP and expertise to enable our end-customers to utilize the power of our biographene to improve the performance and sustainability of their end-products in a cost-efficient and scalable manner – changing the way industry thinks about nanotechnology and how to apply it.

## COMPANY PROFILE

### Target Markets:

- Water
- Grid/Power/Utilities
- Built Environment
- Defence/Military
- Heavy Industry (Cement, Steel, Aluminum, Chemicals, Pulp & Paper...)
- Information, Communications, and Technology Sectors
- Transportation & Mobility
- Natural Resource Extraction (Mining, Forestry, Oil & Gas)

### Leadership:

[David Fisher](#)

### Number of full time employee equivalents:

10 – Toronto, ON

### Investors:

Canaccord, Leeds, Cormark

### Most Recent Equity Capital Raise completed:

Series A (\$2M-\$20M)

### Dilutive Equity Funding Raised (\$CAD):

\$2,400,000.00

### Planned Equity Raise:

\$3M round by October 31





# Carbin Minerals

From air to rock: permanent carbon dioxide removal

Carbin Minerals exists to fill a major gap in the emerging carbon removal industry. In order to meet net zero targets, progressive corporations are actively seeking carbon credits that represent permanent removal of carbon dioxide from the atmosphere. However, solutions that capture and permanently store atmospheric carbon dioxide are in short supply.

Simultaneously, mining companies are under increasing pressure from investors, consumers, regulators, and society at large to clean up the industry’s reputation and decarbonize. In particular, mining companies that supply the metals necessary for the world’s transition to renewable energy are seeking to produce carbon-neutral metals. These same mining companies produce rock waste that has enormous potential to permanently sequester carbon dioxide. However, they do not have the technology or expertise to unlock, maximize, and verify this carbon removal potential.

Carbin Minerals’ technology accelerates the natural process of atmospheric carbon mineralization, removing carbon dioxide from the air and storing it permanently as rock. To do this at scale, they partner with the minerals industry to implement their technology at active mines, creating mines that produce permanent carbon removal as well as the metals essential for the clean energy transition. The result: 5-50x increase in CO2 mineralization and a megaton to gigaton scale opportunity for permanent carbon dioxide removal.

## COMPANY PROFILE

### Target Markets:

- Carbon Dioxide Removal

### Leadership:

[Paul Needham](#)

**Number of full time employee equivalents:**  
5 - Vancouver, BC

**Acceleration Programs:**  
Hatch at e@UBC

### Awards and Recognition:

- Carbon Removal XPRIZE Milestone Award
- BC Tech Startup of the Year Finalist

### Non-dilutive Grant Funding:

- SDTC
- XPRIZE \$1M Milestone prize

**Grant Funding Raised (\$CAD):**  
\$1,400,000.00

**Investors:**  
Neglected Climate Opportunities LLC (investment arm of Grantham Trust)

**Most Recent Equity Capital Raise completed:**  
Seed (\$500k-\$2M)

**Dilutive Equity Funding Raised (\$CAD):**  
\$1,950,000.00

**Projected Revenues for 2022 (\$CAD):**  
\$300,000.00

**Planned Equity Raise:**  
Yes, TBD

[Pitch Video](#) [Website](#)

BOOK A MEETING



# Carbon Upcycling Technologies

Carbon Upcycling is a waste and carbon utilization company unlocking a new frontier of circular materials

Carbon Upcycling is a waste and carbon utilization company unlocking a new frontier of circular materials. They are tackling the biggest problems on the planet – like climate change and industrial waste. Applying their novel technology platform, they enable hard-to-decarbonize industry to transform local industrial byproducts and natural materials into superior additives.

Their first massive market is concrete, the source of 8% percent of global CO2 emissions and growing. Their novel technology reduces the carbon footprint of cement, sequesters carbon, and improves concrete performance. They do this by opening up a new class of locally available, carbon-sequestering cement replacements. With Carbon Upcycling, cement producers can now create a superior product using local industrial byproducts and natural materials and save the planet at the same time.

## COMPANY PROFILE

### Target Markets:

- Built Environment
- Heavy Industry (Cement, Steel, Aluminum, Chemicals, Pulp & Paper...)

### Leadership:

[Apoorv Sinha](#)

### Number of full time employee equivalents:

15 - Calgary, AB

### Acceleration Programs:

Net Zero Accelerator - USGBC-LA, Carbon to Value Initiative

### Awards and Recognition:

- Foresight 50 (2021)
- 76West Competition (2019)
- Solar Impulse Efficient Solution Label
- X-Factor Award, NRG COSIA Carbon XPRIZE
- CEO named Forbes 30 Under 30 (2020)

### Non-dilutive Grant Funding:

- NRC IRAP
- Alberta Innovates
- ERA
- NRCan
- NSERC (+AI+CASCE)
- MITACS
- NYSERDA

### Grant Funding Raised (\$CAD):

\$10,000,000.00

### Investors:

CEMEX

### Most Recent Equity Capital Raise completed:

Seed, \$6,500,000

### Planned Equity Raise:

Series A in Fall 2022, raising \$50M

[Pitch Video](#)

[Website](#)



BOOK A MEETING

# CarboNet

Accelerating the world's transition to recycled water with a new class of chemistry.

CarboNet is a specialty chemicals company transforming how chemicals are developed and used to treat and recycle water across industries. Using our proprietary NanoNet™ chemical platform we rapidly develop water treatment products that target and control contaminants for removal to move industries and our planet towards a cleaner, brighter future.

It's estimated that by 2050, the global population will reach 9 billion people and the demand for water will increase by 55% worldwide – a level that is unsustainable with current practices. With the UN stating that it's likely that over 80% of wastewater is released to the environment without adequate treatment globally and that water pollution has worsened in almost all rivers in Africa, Asia, and Latin America since the 1990s, it's clear that improved water treatment and accessibility is an urgent matter. As global water scarcity forces industry and governments to address widespread social and economic crises, water recycling is increasingly turned to as the most impactful solution.

We're a diverse team committed to common goals and use unconventional thinking to create modern solutions that are magnitudes more effective than their predecessors and produce radical results. We have a deep respect for the way the world works and know that answers to the world's problems lie in unlocking new ideas based on sound science.

Our work is helping accelerate the world's transition to recycled water, alleviating pressures put on our freshwater supplies, and ensuring that future generations have access to one of the most basic necessities.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

In a market that has seen little innovation in over 50 years, CarboNet brings an unconventional approach to chemicals that make them cleaner and simpler to deploy. Since commercializing in 2020, CarboNet has established a dominant presence in the Texas Permian Basin, enabling many in the oil and gas industry including exploration & production (E&P) operators, water treatment engineers, and midstream companies to more efficiently and effectively recycle produced water. CarboNet products continue to deliver a new class of chemistry that is a quantum leap in efficacy over commodity chemicals. Beyond produced water, CarboNet has also proven applications in mining, pulp & paper, food & beverage, and cosmetics, and is engaged with several global chemical companies as potential distributor partners. CarboNet continues to amplify the impact of water recycling in helping to address water scarcity. Our current impact to date include: Treating over 200B liters of water, shipping over 14M liters of chemicals, & treating >25 sites in the Permian Basin.

## COMPANY PROFILE

### Target Markets:

- Water

### Leadership:

[Barry Yates](#)

**Number of full time employee equivalents:**  
50 - Vancouver, BC

**Acceleration Programs:**  
[Entrepreneurship@UBC](#)

### Awards and Recognition:

- Foresight 50 (2021)
- Clean50
- Fast Company - World Changing Ideas
- BC Technology Impact Awards

### Non-dilutive Grant Funding:

- NRC IRAP
- SR&ED
- Eco Grant

**Grant Funding Raised (\$CAD):**  
\$1,800,000.00

**Seed, Angel and/or VC Equity Investment:**  
Yes

**Most Recent Equity Capital Raise completed:**  
Seed (\$500k-\$2M)

**Dilutive Equity Funding Raised (\$CAD):**  
\$18,200,000.00

**Projected Revenues for 2022 (\$CAD):**  
\$24,000,000.00





# CarbonGraph

CarbonGraph is a digital platform that lets companies share the carbon footprint of their products with their customers..

CarbonGraph's mission is to make the sustainability of goods and services just as transparent as their price, accelerating the world's transition to carbon neutrality. Founded in February 2021 by a diverse team coming from decarbonization, enterprise SaaS, and management consulting, CarbonGraph has since grown to a team of 7 with \$15k ARR (contracted) and a sales pipeline expected value of \$300k ARR, focused primarily in the plant-based food sector where we are already gaining brand recognition in the US and Canada. CarbonGraph is one of the few options for SMBs to build their own high-quality, auditable lifecycle carbon footprints that comply with the GHG Protocol Product Standard and ISO 14067, and usable by any size of company in any industry. As of 2022, over 50% of the Fortune 500 have made public carbon neutrality commitments by 2050 or earlier. New US, EU, and Canadian regulations require many companies to track the carbon emissions in their supply chain, meaning asking each of their suppliers for a product carbon footprint. Product Carbon Footprints typically cost \$100k+ to develop, and CarbonGraph makes them available for \$10k/yr. We are the only North American product carbon footprinting platform and have two main competitors in Europe (CarbonCloud and Ecochain). We have received significant support from the cleantech ecosystem in Canada including \$95k in NRC IRAP to support our platform development. CarbonGraph is currently raising a \$750k pre-seed round and we've received our first cheques from Plug and Play Ventures and various angel investors.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

Existing solutions for measuring carbon footprints are lacking in two respects: they are far too expensive for SMEs and they focus solely on corporate-level and not product-level accounting. The primary providers of carbon accounting services are management consultancies and accounting firms who account for over 90% of the carbon accounting market today, which has a TAM of CAD \$10B in 2022 and has been growing at 25% CAGR the last 5 years. The remaining 10% of the market is almost exclusively corporate-accounting software platforms like Persefoni, Watershed, Normative, and Emitwise. The leading companies in this space were founded less than 3 years ago and already boast >\$100M valuations, but they are focused on public companies and asset managers as customers, with matching pricetags. When it comes to product level carbon footprints, the type of data required by the vast majority of companies, only a few specialist tools like OpenLCA and SimaPro are widely available. These require \$100k+ in lifecycle analyst consulting fees to use due to the lack of usability by non-experts, the price of licenses, and the unpreparedness of most businesses to digitize the data they need to produce a carbon footprint. CarbonGraph is a leading member of a new wave of product carbon footprint SaaS (joined by European competitors CarbonCloud and Ecochain) that seeks to provide easy-to-use and inexpensive software that can truly be rolled out across global supply chains and enable every company to measure and communicate the sustainability of their products.

[Pitch Video](#)

[Website](#)

[in](#)

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Agrifood
- Natural Resource Extraction (Mining, Forestry, Oil & Gas)
- Heavy Industry (Cement, Steel, Aluminum, Chemicals, Pulp & Paper...)
- Retail Consumers

### Leadership:

[Sam Anderson](#)

### Number of full time employee equivalents:

6 - Toronto, ON

### Acceleration Programs:

Foresight Canada, DMZ Bootcamp 2021, Earth Tech, AC:Studio

### Awards and Recognition:

- VentureCAT Global Pitch Competition semifinalist

### Non-dilutive Grant Funding:

- NRC IRAP
- SDTC Seed Fund
- NSERC Applied Research Grant
- AC:Studio grant
- SWPP

### Grant Funding Raised (\$CAD):

\$200,000.00

### Investors:

Plug and Play Ventures

### Most Recent Equity Capital Raise completed:

Pre-seed (Up to \$500k)

### Dilutive Equity Funding Raised (\$CAD):

\$90,000.00

### Projected Revenues for 2022 (\$CAD):

\$40,000.00

### Planned Equity Raise:

Midway through \$750k Pre-Seed round with \$90k in hand, \$130k soft-committed, and \$200k in diligence



# Copperstone Technologies Ltd.

Robotics for mission critical data

Copperstone helps industrial clients manage liabilities and safety costs associated with hazardous sites, particularly water and waste water facilities. We do this by building field robots that can access hazardous environments in a way never before possible. Our robots bring sensors or sampling payloads to site, keeping people out of harms way, reducing costs, and improving efficiencies for our clients. Our primary industries involve mining, municipal water, agricultural, and industrial facilities.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

We have closed a deal with a Boston-based Private Equity firm in Sept 2022 which will fuel our growth. We have bootstrapped our way so far, yet earned international clients, the world's biggest mining companies. They use Copperstone's robots to help solve some of the greatest environmental and safety challenges in the mining industry.

## COMPANY PROFILE

### Target Markets:

- Water
- Natural Resource Extraction (Mining, Forestry, Oil & Gas)

### Leadership:

[Craig Milne](#)

**Number of full time employee equivalents:**  
20 - Edmonton, AB

**Acceleration Programs:**  
Foresight Canada, Creative Destruction Labs, NorCat

### Awards and Recognition:

- MITACS Entrepreneur of the Year

### Non-dilutive Grant Funding:

- NRC IRAP
- SR&ED
- Alberta Innovates
- TecTerra

**Grant Funding Raised (\$CAD):**  
\$1,976,601.00

### Investors:

Windsail Capital LLC

**Most Recent Equity Capital Raise completed:**  
Series A (\$2M-\$20M)

**Dilutive Equity Funding Raised (\$CAD):**  
\$4680000.00

**Projected Revenues for 2022 (\$CAD):**  
\$2,074,000.00

**Planned Equity Raise:**  
18 months, \$20M+

[Pitch Video](#)

[Website](#)



BOOK A MEETING



# Cvictus Inc.

Cvictus’s technology can decarbonize difficult sectors with hydrogen and chemical feedstocks that are ‘cleaner than green and cheaper than grey’.

The world today produces over 90 million tonnes of hydrogen, almost all from steam methane reforming (SMR) that is as dirty as coal-fired power generation. Electrolysis from renewable energy is much cleaner but also higher cost and consumes huge amounts of fresh water (14-18 t/t H2). Cvictus’s patented and proprietary Enhanced Hydrogen Recovery (EHR™) technology can produce clean hydrogen with lower carbon intensity than green hydrogen from hydropower and at a cost that’s less than half the cost of hydrogen from SMRs.

EHR™ extracts hydrogen-rich synthesis gas (syngas) from ultra-deep coal and brine and re-injects associated CO2 back into the space it creates in the same deep seam for permanent geological sequestration, turning coal ‘from a source to a sink’ of CO2. The reinjection of CO2 is inherent to the technology, improving syngas production while allowing sequestration from day one of operations and avoiding transportation challenges, use of aquifers, or cavern development.

Cvictus’s technology and projects target the most difficult climate challenges with flexible applications and huge scalability. We can produce the lowest cost, lowest carbon intensity syngas, hydrogen, methanol, and ammonia to decarbonize the most difficult industries (chemicals, energy, transportation) providing a way for Canada, the US, and many other countries that lack other energy resources to extract valuable products from heavy hydrocarbon while leaving carbon in the ground.

### Why our venture should be considered one of Canada’s 50 most investable cleantech companies:

Cvictus’s patented Enhanced Hydrogen Recovery technology converts very low-value stranded resources into high-value hydrogen and chemical feedstocks without CO2 emissions. At commercial scale, the process generates 80% EBITDA margins. The process can grow rapidly to very large scale at many locations in North America and around the world. We are on track to complete our first small commercial project, which will produce 7 tpd of clean hydrogen, by March 2024. This facility is projected to generate at least \$12 million a year of revenue and \$7 million a year of EBITDA (5-year simple payback) and can be expanded into a much larger and even lower cost full-scale commercial plant within two years. A second project in Wyoming is also underway. We are negotiating an off-take agreement with a prominent international energy company to buy all our clean hydrogen at a floor price that ensures profitability. Our proven technology and world-class team have realistic potential to achieve Cvictus’s vision, “to become the most impactful – and profitable—company on the planet.

[Pitch Video](#)

[Website](#)

[in](#)

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Natural Resource Extraction (Mining, Forestry, Oil & Gas)
- Agrifood
- Transportation & Mobility
- Heavy Industry (Cement, Steel, Aluminum, Chemicals, Pulp & Paper...)
- Grid/Power/Utilities

### Leadership:

[Brett Wilcox](#)

### Number of full time employee equivalents:

7 – Calgary, AB

### Awards and Recognition:

- Clean Resource Innovation Network (CRIN) Reducing Environmental Footprint Competition

### Non-dilutive Grant Funding:

- CRIN’s Reducing Environmental Footprint Competition
- SR&ED
- Alberta Innovates
- MITACs

### Grant Funding Raised (\$CAD):

\$11,000,000.00

### Investors:

Hank Swartout

### Most Recent Equity Capital Raise completed:

Series A (\$2M-\$20M)

### Dilutive Equity Funding Raised (\$CAD):

\$15,000,000.00

### Planned Equity Raise:

\$40M CAD in Series-A





# Digital Water Solutions Inc.

Reducing water loss and providing insight into what is happening underground to municipalities and water utilities.

Digital Water Solutions provides an innovative method of identifying leaks within water distribution networks, saving municipalities and water utilities money through early identification and localization of leaks. Our solution is able to detect leaks in PVC (plastic) pipe, as well as other pipe materials, unlike other solutions currently in the market. The patented approach to finding leaks and localizing leaks within a water network can reduce water loss, saving money and reducing GHG emissions. The hydrant.AI solution also provides pressure monitoring, water temperature monitoring, as well as transient event detection, capture and localization. The solution provides the client with information regarding their water distribution network and what is happening underground. Providing eyes and ears on a part of our aging infrastructure that has not been available 24x7, year-round, until now.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

We are in a position to ramp rapidly over the next year with additional investment, with a forecast of becoming a \$25M company in the next 5 years. We have case studies showing the potential savings that can be achieved from our solution.

[Website](#)  

[BOOK A MEETING](#)

## COMPANY PROFILE

### Target Markets:

- Water

**Number of full time employee equivalents:**  
8 - Guelph, ON

**Acceleration Programs:**  
Foresight Canada, BREW 2.0

### Awards and Recognition:

- Foresight 50 (2021)
- Smart Water Summit Water Next Award (2020) and Vendor to Watch (2022)

### Non-dilutive Grant Funding:

- CanExport
- NRC IRAP
- Scale.AI

**Grant Funding Raised (\$CAD):**  
\$143,000.00

**Investors:**  
Eramosa Engineering Inc.

**Most Recent Equity Capital Raise completed:**  
Pre-seed (Up to \$500k)

**Dilutive Equity Funding Raised (\$CAD):**  
\$530,000.00

**Projected Revenues for 2022 (\$CAD):**  
\$545,000.00

**Planned Equity Raise:**  
Currently raising \$1.5M Seed Round closing December 15, 2022



# Earthware

Earthware is a high growth return-for-reuse takeout container service. Earthware's business model will disrupt the \$160 Billion takeout container industry.

It's no secret that reusable and returnable packaging is better for the environment than single-use packaging. Less total greenhouse gas emissions, less total energy used, and less solid waste to landfills.

In 10 months Earthware has become a force for garbage reduction in Calgary. Earthware with its ever growing list of 50 restaurants, Marriott Hotels, grocery stores and others has stopped over 10,000 takeout containers from hitting our landfills. This incredible growth is set to multiply exponentially in November of this year with a new business model made possible by an agreement with the Alberta Bottle Depot Association. Restaurants, hotels, grocers and others will charge a small deposit on Earthware containers and consumers can retrieve a portion of that deposit by returning Earthware containers with their bottles and cans. Earthware estimates that it will quickly grow to 10,000 containers per day stopped from going into our landfills and will begin to expand this model to cities all over the world.

Marriott is signing on 4 additional hotels in Calgary on October 11th with an eventual rollout to 20 in Calgary and another 15 in Edmonton when we get there. This represents our full forecast for the next year of business. It also represents a customer base in any other city we expand to.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

Success to us is continuously adding new cities to the Earthware platform. This success will result in the elimination of millions of single-use containers per day that would have ended up in our landfills. Our platform will eventually allow major packaged goods companies to finally be able to get their packaging back, cleaned and ready to use again. The platform will also pay millions of dollars a day in micro payments (deposit returns) to many of our most vulnerable citizens. Our wash facilities will be staffed primarily by people who find it difficult to find careers because of disabilities. Our passionate group is headed by a serial entrepreneur who has built and sold multinational companies.

[Website](#)    

[BOOK A MEETING](#)

## COMPANY PROFILE

### Target Markets:

- Agrifood

### Leadership:

[John MacInnes](#)

### Number of full time employee equivalents:

4 - Calgary, AB

### Awards and Recognition:

- Clean 50 award (nominee)
- National Zero Waste Council Member
- Ellen MacArthur Foundation Member

### Non-dilutive Grant Funding:

- Alberta Innovates
- SR&ED

**Grant Funding Raised (\$CAD):**  
\$100,000.00

### Most Recent Equity Capital Raise completed:

Pre-seed (Up to \$500k)

### Dilutive Equity Funding Raised (\$CAD):

\$490,000.00

### Projected Revenues for 2022 (\$CAD):

\$40,000.00

### Planned Equity Raise:

Dilutive Funding, \$1.2M



# Ekona Power Inc.

Ekona is unlocking the power of clean hydrogen.

Industrial hydrogen (H2) markets are dominated by upgrading, petroleum refining, and ammonia production. Steam methane reforming (SMR) is the current industry standard and lowest cost option for large-scale H2 production. SMR, however, generates substantial greenhouse gas (GHG) emissions, which are costly to mitigate using carbon capture and sequestration (CCS). By contrast, green H2 solutions using electrolysis from renewable electricity can be attractive for their ultra-low emissions, but they are energy intensive and expensive. New solutions are needed that can meet the growing demand for low carbonintensity fuels and decarbonized industrial feedstocks without adding cost.

Ekona’s novel pulsed methane pyrolysis (PMP) solution converts NG into H2 and solid carbon, significantly reducing CO2 emissions. The pyrolysis reactor uses the principles of pulsed-combustion and high-speed gas dynamics to dissociate feedstock methane. This unique solution is low-cost, scalable and solves carbon fouling issues that plague other pyrolysis platforms. The PMP reactor can be integrated with industry-standard balance of plant for H2 purification and carbon separation, simplifying industrial process integration. Since the PMP produces solid carbon, siting is not reliant on CCS infrastructure. Moreover, since water is not a required feedstock, the PMP can be located wherever NG infrastructure exists. Ekona’s PMP produces industrial H2 at costs comparable to incumbent SMRs, while reducing GHG emissions by 90%.

### Why our venture should be considered one of Canada’s 50 most investable cleantech companies:

Ekona is deeply committed to delivering clean energy solutions that cost-effectively address industry pain points. Their methane pyrolysis technology builds on existing natural gas infrastructure to deliver a solution that can accelerate the abatement of greenhouse gas emissions and rapidly scale clean hydrogen pathways for “tough to decarbonize” sectors of the economy. This year, Ekona closed a Series A round valued at \$79M(CAD). The use of proceeds will support their technology development program, scaling, and field deployment of their methane pyrolysis solution.

[Website](#)

in

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Transportation & Mobility
- Natural Resource Extraction (Mining, Forestry, Oil & Gas)
- Heavy Industry (Cement, Steel, Aluminum, Chemicals, Pulp & Paper...)

### Leadership:

Chris Reid

### Number of full time employee equivalents:

30 – Burnaby, BC

### Awards and Recognition:

- Foresight 50 (2021)
- Global Cleantech 100 awards

### Non-dilutive Grant Funding:

- BC Innovative Clean Energy (ICE) Fund
- National Research Council
- NRC Industrial Research Assistance Program
- Natural Resources Canada
- Breakthrough Energy Solutions Canada (BESC)
- Emissions Reduction Alberta
- Natural Gas Innovation Fund
- Clean Resource Innovation Network

### Grant Funding Raised (\$CAD):

\$20,000,000.00

### Investors:

Evok Innovations, Innovative Breakthrough Energy Solutions (IBET), BDC Capital, Baker Hughes, Mitsui, NGIF Ventures, TransAlta, ConocoPhillips, Continental Resources, ARC Resources, Trirec, and McKinley Capital

### Most Recent Equity Capital Raise completed:

Series A (\$2M-\$20M)

### Dilutive Equity Funding Raised (\$CAD):

\$79,000,000.00

### Planned Equity Raise:

Series B





# Farment

Fermentation solutions for bio regenerative performance

1/3 of all the food and drink we consume as humans is fermented. Farment takes the same approach from the food we feed ourselves to the nutrients we feed our crops.

Average processed manure has about 5 kg of nitrogen per tonne. This makes for very large applications in some cases 10 to 20 tonnes per acre with limited nutrient availability and imbalances.

Farment changes all that, our ferments can have over 100 kg of nitrogen per tonne with up to 50 percent available nitrogen. This nitrogen mainly consists of amino acids proteins, peptides and tripeptides making your nitrogen 20 times more effective and available to your plants because they no longer need to assimilate the NH<sub>4</sub> and NO<sub>3</sub> into amino acids.

2 tonnes of our fermented manure is the equivalent 1 one tonne of ammonium sulphate that cost the same. If you include bio methane, carbon credits, and our fermented manure is considered organic in Canada, it's clear to see we are the new way to apply nitrogen to your soil.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

Nitrogen use efficiency is hands down the biggest issue facing agriculture today. Farment is leading a new way to apply nitrogen in the most efficient way possible. With a business that reports to having over \$100 billion in annual sales in North America and zero changes since the Haber Bosch process was developed in the 1940s this industry is in desperate need of change. Farment has IP in the USA Canada and Europe with partners in all 3 in just one short year. Our first piece of equipment is now fully developed and in use. We presently have customers in the USA and Canada and soon the UK.

[Website](#)

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Water
- Grid/Power/Utilities
- Agrifood
- Retail Consumers

### Leadership:

[Ralph Lett](#)

### Number of full time employee equivalents:

4 - Vernon, BC

### Acceleration Programs:

Foresight Canada

### Investors:

Fred Gulowski, owner of Okanagan Aggregates

### Most Recent Equity Capital Raise completed:

Seed (\$500k-\$2M)

### Dilutive Equity Funding Raised (\$CAD):

\$1,000,000.00

### Projected Revenues for 2022 (in \$CAD)

\$3,000,000.00

### Planned Equity Raise:

\$20-\$30M raise in 2023



# FREDsense Technologies

## Building Better Biosensors

Do you know what's in your water? Chances are you don't and this is a major challenge for communities, industrials, and environmental consultants alike. Regulations and low detection limits make it difficult to get highly accurate and fast water quality results that affect a company's bottom line and community safety. With emerging contaminants like PFAS, Lead, and other harmful chemicals we need solutions that anyone can use to understand their water chemistry. At FREDsense, we build portable field kits that are simple to use, highly accurate, and can measure to the very low limits being introduced for some of the most complex compounds out there. We genetically modify organisms and convert them into electrochemical sensors that are highly specific for the compound you want to measure. By utilizing our patented hardware technology, we can package and deploy these microorganisms virtually anywhere. This means that for the over \$3 billion water quality industry, we can provide significant cost savings for a water utility looking to optimize their treatment systems, saving them significantly on overtreating their water and providing confidence that other field systems cannot meet. FREDsense has deployed our solution with water utility customers, consultants, and government agencies along with amassing strong corporate partnerships with agencies such as Xylem and Ginkgo Bioworks. We are well positioned to launch a series of new sensors into the industrial wastewater and environmental space for PFAS, selenium, and many more compounds. At FREDsense, we believe that everyone deserves to understand what is in their water.

### Why our venture should be considered one of Canada's 50 most investable cleantech companies:

FREDsense has had a consistent growth over the past few years due to our ability to quickly pivot and increase our value. We have multiple product offerings that have demonstrated the value of our technology platform through arsenic monitoring, COVID-19 wastewater analysis and now shifting to the analysis of PFAS, a more than \$500 million market opportunity emerging rapidly in the water quality sector. Our key platform technology has been adopted by corporate agencies, water utilities and large customers who understand the importance and value of sensors in meeting today's growing challenges. With our last raise from BDC CleanTech, FREDsense built a new product line for COVID-19, established a critical partnership with the worlds largest synthetic biology company and amassed a rockstar team of professionals in the water space.

[Pitch Video](#)

[Website](#)



BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Water

### Leadership:

[David Lloyd](#)

### Number of full time employee equivalents:

18 - Calgary, AB

### Acceleration Programs:

Foresight Canada, Xylem Accelerator, WaterNext, Elemental Excelerator, Imagine H2O, Singularity University, Creative Destruction Lab

### Awards and Recognition:

- Foresight 50 (2021)
- Singularity University Global Grand Challenge Water
- PwC Innovation Award
- Imagine H2O Finalist
- Elemental Excelerator Ohana Award Winner

### Non-dilutive Grant Funding:

- NRC IRAP
- NRCan
- ReMAP

### Grant Funding Raised (\$CAD):

\$3,200,000.00

### Investors:

BDC CleanTech

### Most Recent Equity Capital Raise completed:

Seed (\$500k-\$2M)

### Dilutive Equity Funding Raised (\$CAD):

\$3,700,000.00

### Projected Revenues for 2022 (\$CAD)

\$400,000.00

### Planned Equity Raise:

Currently raising a \$5M Series A



# Galatea Technologies Inc.

Galatea: The energy industry's best technology platform to digitalize, optimize and automate transportation workflows.

Galatea: The energy industry's best technology platform to digitalize, optimize, and automate transportation workflows – enabling businesses with the data and tools necessary to maximize operational, financial, and environmental performance. Galatea Technologies enables users to find the optimal combination of receiving facility and transportation providers and offers insights that lower OPEX, quantify GHG emissions, and provide cradle to grave regulatory compliance.

Each year, in North America alone, oil & gas producers spend over \$40 billion dollars on trucking & disposal. Having consistently demonstrated savings upwards of 20%, this presents a huge opportunity to digitalize, optimize, and automate one of the largest operating expenditures over the life of an asset.

This market is advantageous to technology disruption as it is highly regulated, constantly changing, and the workflow of each fluid transportation load is onerous and clerical. This allows Galatea to combine its decision support engine with cost saving automation which can be directly applied to our client's business process, all while providing material savings through cost driven optimization.

There has never been a better opportunity to leverage Galatea's proprietary SaaS platform to enhance fluid and waste management workflows by providing transparency and intelligence to balance real-time supply and demand constraints both past, present, and future.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

As humanity looks to transition to more sustainable energy sources, technologies like Galatea are helping energy producers today measure, manage, and reduce environmental impacts. Waste and water are playing an increased role in energy production and Galatea works with producers to digitalize, optimize, and automate these workflows connecting waste and water byproducts with beneficial reuse, recycling, and treatment technologies. Through their intelligent platform producers can both reduce environmental impacts while lowering operating expenses further incentivizing performance.

## COMPANY PROFILE

### Target Markets:

- Transportation & Mobility
- Water
- Natural Resource Extraction (Mining, Forestry, Oil & Gas)

### Leadership:

Chris Hayden

### Number of full time employee equivalents:

15 – Calgary, AB

### Acceleration Programs:

Foresight Canada, SCALE AI

### Non-dilutive Grant Funding:

- NRC IRAP
- Western Economic Diversification
- Alberta Innovates

### Grant Funding Raised (\$CAD):

\$2,000,000.00

### Investors:

Natural Gas Innovation Fund, Picante Capital, WVL Capital, Longbow

### Most Recent Equity Capital Raise completed:

Seed (\$500k-\$2M)

### Dilutive Equity Funding Raised (\$CAD):

\$2,100,000.00

### Projected Revenues for 2022 (\$CAD)

\$600,000.00

### Planned Equity Raise:

Series A, Q4 2023, \$5M-\$10M CAD

[Pitch Video](#)

[Website](#)

[in](#)

BOOK A MEETING



# GRT

Wash. Sort. Reuse.

Now in its second year of operation, GRT’s Resource Regeneration Facility has diverted over 80,000 tonnes of waste soil from Vancouver Island landfills, creating valuable construction aggregate products for beneficial reuse in the process. In keeping with its vision of “a cleaner world with a sustainable resource economy”, GRT continues to develop innovative treatment methods for additional contaminants of concern (including a coal study sponsored by NRC IRAP), as well as piloting novel waste-to-resource applications for more challenging output materials, such as silty clay. GRT is currently developing a pilot project with a local First Nation to construct a living dike using 100% regenerated materials, which will be a case study in zero-waste climate mitigation infrastructure.

### Why our venture should be considered one of Canada’s 50 most investable cleantech companies:

The importance of landfill diversion has penetrated the public consciousness in recent years, particularly as landfill space becomes increasingly limited and disposal costs rise along with associated environmental concerns. Recently, the topic of sand and aggregate shortages due to urban construction demand has gained more widespread attention and consideration. GRT’s waste-to-product model addresses both of these of these concerns.

By rethinking waste, specifically waste soil, GRT is able to bring sustainable, valuable materials to market that meet the critical, growing need for circularity within built environments. The resource regeneration concept has broad applicability to urban regions throughout Canada, saving carbon emissions from transport of waste soils to landfill, and aggregates to urban areas.

Given the success of its pilot facility in Nanaimo, BC, GRT is exceptionally well positioned to replicate this model in subsequent cities (metro Vancouver & Seattle). Aside from being first to market its process in Canada, GRT’s executive team brings immense professional experience in environmental engineering, environmental finance and contaminated sites regulation.

This depth of competency enables GRT to both lobby for much-needed policy change as it pertains to the use of clean, regenerated aggregate, while also innovating formulas effectively to treat a wider variety of challenging soils.

[Website](#)

in

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Waste-to-Resource

### Leadership:

Peter T. Reid

### Number of full time employee equivalents:

25 - Victoria, BC

### Acceleration Programs:

NRC IRAP

### Awards and Recognition:

- Foresight 50 (2021)

### Non-dilutive Grant Funding:

- NRC IRAP
- Innovate BC
- SR&ED

### Grant Funding Raised (\$CAD):

\$600,000.00

### Investors:

Family Office Investors

### Most Recent Equity Capital Raise completed:

Private Capital Raise of \$6M (2020)

### Dilutive Equity Funding Raised (\$CAD):

\$8,000,000.00

### Projected Revenues for 2022 (\$CAD):

\$6,000,000.00

### Planned Equity Raise:

Raising private capital to support build of second plant



## Hempalta Inc.

Hemp to Better the Planet!

Hempalta Inc. is an agricultural technology company focused on innovative hemp processing and product creation. It is one of the only commercial-scale hemp processors in North America able to manufacture high-value hemp products. HEMPALTA™ products are made from industrial hemp grown sustainably in Southern Alberta and processed using a state-of-the-art HempTrain™ Advanced Processing Plant at our production facility in the heart of Calgary, Alberta, Canada. The Company is led by passionate advocates for industrial hemp who have years of operations, manufacturing, marketing, consumer packaged goods, and retail sales experience. We work with progressive farmers and world-recognized researchers with unparalleled expertise.

### Why our venture should be considered one of Canada's 50 most investable cleantech companies:

While consumer demand in North America is high for industrial hemp products such as building materials, animal feed, textiles, protein, paper, plastics, and biofuels, supply chains are still in their infancy with much of the processed hemp products required for manufacturing currently being imported. At the heart of the problem is the lack of industrial hemp processing plants. While farmers are interested in growing the crop in many instances, specialized technologically advanced hemp processing facilities are needed to produce high-value products. Currently, there is a production gap in connecting farmers with high-value markets, due to the lack of technological infrastructure available. At Hempalta, we're using the natural strength and sustainability of hemp to dramatically improve how we make all things we need and how we interact with the earth. Our near waste-free, state-of-the-art processing facility uses HempTrain™ technology to unlock hemp's potential as a strong and renewable material. Backed by world-renowned researchers and experienced farmers, our product line already includes game-changing industrial, petcare, food preservation, and gardening products, with exciting new possibilities emerging every day. As one of the only commercial-scale hemp processors in North America, we're passionate about making the world better - cleaner, healthier, and more ecologically sound - for future generations. Corporate social responsibility is in our DNA: we're building our company from the ground up to be a force for good.

### COMPANY PROFILE

#### Target Markets:

- Retail Consumers
- Agrifood

#### Leadership:

[Darren Bondar](#)

#### Number of full time employee equivalents:

12 - Calgary, AB

#### Awards and Recognition:

- Futurology.life 35 most innovative Alberta-based agriculture technology companies

#### Non-dilutive Grant Funding:

- Alberta Jobs Now Program

#### Grant Funding Raised (\$CAD):

\$150,000.00

#### Investors:

Prairie Merchant & Fullbrooke Thorpe

#### Most Recent Equity Capital Raise completed:

\$3.3M Seed Funding

#### Dilutive Equity Funding Raised (\$CAD):

\$3,300,000.00

#### Projected Revenues for 2022 (\$CAD)

\$400,000.00

#### Planned Equity Raise:

[Currently running a hybrid crowd-fund for \\$1.8M](#)

[Pitch Video](#)

[Website](#)



BOOK A MEETING

# Highwood Emissions Management

Our mission is to collaborate, innovate, and educate our way to a world with effective and affordable emissions management solutions.

Highwood's Emissions Management Toolkit (EMT) is a software platform that creates a digital twin of an oil and gas company's emissions inventory and a dynamic knowledge ecosystem of technologies, incentives, and projects for mitigating emissions. The core purpose of EMT is to help operators make better emissions management decisions and accelerate decarbonization by revealing profitable emission reduction opportunities.

1. Emissions Insights Module: An inventory management system that can be considered the "base module" of EMT. Users are able to build out their inventories and visualize their emissions data, methane, and carbon intensity, simple benchmarking, and the impact of changing inventories and production over time, including both projected and historical emissions. Emissions Insights is a data visualization tool that can be used by leadership teams to engage with emissions data.

2. Reduction Pathways Module: A framework for building marginal abatement cost curves (MACCs) that are both interactive and customized to an operator's assets. MACCs are then used to conduct scenario analysis to explore and formalize emissions reduction roadmaps.

3. Measurement & Reconciliation Module: Enable clients to upload and manage fugitive emissions data using standard formats that applies to the broad range of methane detection and quantification technologies at different spatial and temporal scales. Provide tools for clients to perform reconciliation among bottom-up inventories and top-down measurements to achieve compliance with OGMP 2.0, Veritas, and other future initiatives or regulations.

4. Differentiated Gas: A framework for understanding and modeling the various options available to O&G companies in regulatory and voluntary carbon markets

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

Highwood Emissions Management Inc. is based in Calgary, Alberta. Working with industry, government, and innovators, we leverage data, analytics, knowledge, and experience to optimize GHG emissions management. Our mission is to collaborate, innovate, and educate the path to a world with effective and affordable emissions management solutions. Our team is uniquely suited to combine leading analytical methods with detailed, nuanced interpretations from field experts. Our SaaS requires expertise at the intersection of engineering, oil and gas, and academia, which Highwood is uniquely suited to offer. Our goal is to become the go to emissions management software platform. With a global market potential of \$7.4 billion, Highwood is poised to take advantage of this market looking at decarbonization for the long term.

[Website](#)

in

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Natural Resource Extraction (Mining, Forestry, Oil & Gas)

**Number of full time employee equivalents:**  
22 - Calgary, AB

**Acceleration Programs:**  
Foresight Canada

### Non-dilutive Grant Funding:

- NRC IRAP
- Digital Innovation in Clean Energy (DICE), Alberta Innovates

**Grant Funding Raised (\$CAD):**  
\$500,000.00

**Projected Revenues for 2022 (\$CAD)**  
\$2,700,000.00

**Planned Equity Raise:**  
Series A



# HTEC

## Fueling the Drive to Hydrogen

HTEC is Canada’s leading hydrogen production, dispensing, supply, and fleet transition solutions company. The company provides end-to-end solutions across the clean hydrogen value chain to advance the widespread deployment of hydrogen electric vehicles. HTEC successfully designed and built the nation’s first hydrogen refueling station network and is expanding it further across the country.

Currently, HTEC owns and operates three hydrogen fueling stations in the lower mainland of BC, one in Victoria and operates a containerized station in Quebec with many more at various stages of planning and development across the country. HTEC also owns a hydrogen refueling station in California.

The single biggest impact of HTEC’s work to date, has been the arrival of commercial FCEVs in Canada. In the last two years (2020–2021), a total of 190 FCEVs have been sold in BC alone. Consequently, in the same period, HTEC has filled FCEVs with over 14,000 kilograms of hydrogen, in over 5000 fills. This roughly translates to the equivalent of 5 tonnes of CO2 emissions reduction per week, enabled by HTEC’s hydrogen.

### Why our venture should be considered one of Canada’s 50 most investable cleantech companies:

HTEC’s complementary four business units - Clean Fuels, Transportation Solutions, Stations & Distribution, and Technology Solutions - allow their partners and customers an ability to adopt hydrogen electric vehicles in a meaningful way and ensures future widespread adoption.

Designing, building, owning and operating Canada’s first hydrogen refueling station network solidified their position as a leader in the industry. They are currently building hydrogen production facilities as they expand the infrastructure across North America while helping fleets with transition planning and vehicle leasing services.

With active clean hydrogen projects across North America, HTEC’s mission is well-aligned with the global commitment to achieving net-zero emissions targets and Canada’s goal by 2050. With nearly 100 employees and the recent strategic acquisition of Zen Clean Energy Solutions, HTEC is a high-growth organization.

[Website](#)

in

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Transportation & Mobility

### Leadership:

Shannon Halliday

### Number of full time employee equivalents:

91 – BC

### Acceleration Programs:

Foresight Canada

### Awards and Recognition:

- Foresight 50 (2021)
- CICE Open Innovation Award (2022)
- Clean50 Top Project (2020)
- North Van Business Excellence Award
- BC’s Ready to Rocket list (2020)

### Non-dilutive Grant Funding:

- NRCAN
- Province of BC
- Federal Government

### Investors:

Chart Industries, Inc. (Chart) and I Squared Capital (ISQ)

### Most Recent Equity Capital Raise completed:

Series B+ (\$20M+)

### Planned Equity Raise:

Yes



# Hydra Energy

Real Hydrogen Now

Despite three decades of massive effort and investment, freight truck emissions have more than tripled and show no signs of slowing. Heavy-duty trucks account for 1.37% of all vehicles on the road but contribute 30% of all transport related emissions. In Canada, they are forecasted to grow another 17% by 2030. Governments have introduced mandates to achieve net zero, but the technical ability and availability of zero emissions trucking solutions has not caught up.

Hydra has developed a proprietary kit which allows a simple, 2-day conversion of existing vehicles to run on hydrogen-diesel co-combustion. This allows existing diesel heavy-duty trucks to displace their emissions up to 40%. The hydrogen is injected before entering the engine block and requires no engine modification. Hydra's proprietary ECU is built from the ground up in-house, designed and spec'd for specific outcomes. Hydra's solution is platform agnostic and easy to install on any truck, and thus can instantly adapt to any fleet, meeting them where they are, and is easily deployed on the vehicles they already operate.

Hydra's Hydrogen-as-a-Service™ is offered along a corridor running on Highway 16, connecting Canada's third largest port of Prince Rupert, through northern BC to Prince George, and into Edmonton, Alberta.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

In the past year, Hydra has continued to build momentum delivering trucks converted with our proprietary hydrogen-diesel co-combustion kit to paying fleet customers in BC and Alberta.

They have broken ground on the world's largest hydrogen station based in Prince George where they are building their own lowcarbon hydrogen supply. Customer traction continues to grow with local fleets because of the diesel parity offered, and they are entering the next big push to sign a remaining 53 trucks that can be serviced by the station.

In Alberta, Hydra is working with the Edmonton International Airport to explore airside vehicle conversions, in addition to a land on which they are providing their fleets to access hydrogen refueling infrastructure. Hydra has also developed a new business model that benefits from higher margins as it doesn't require CapEx, which extends their Hydrogen-as-a-Service model to licensees.

## COMPANY PROFILE

### Target Markets:

- Transportation & Mobility

### Leadership:

[Jessica Verhagen](#)

### Number of full time employee equivalents:

20 - Delta, BC

### Acceleration Programs:

Foresight Canada

### Awards and Recognition:

- Foresight 50 (2021)
- Clean50
- Future 50

### Non-dilutive Grant Funding:

- NRC IRAP
- SDTC
- ECCC
- BC LCFS Part 3 Agreement
- LCEF
- BC CICE

### Grant Funding Raised (\$CAD):

\$5,000,000.00

### Seed, Angel and/or VC Equity Investment:

Yes

### Most Recent Equity Capital Raise completed:

Series A (\$2M-\$20M)

### Dilutive Equity Funding Raised (\$CAD):

\$10,000,000.00

### Planned Equity Raise:

December 2022 to close \$14M in equity

[Pitch Video](#)

[Website](#)



BOOK A MEETING





# Intelligent City

Build Smarter – Live Better – Think Change

Intelligent City, based in Vancouver BC, is an urban housing technology company, that simultaneously addresses 3 urgent problems: housing affordability, urban livability, and need for life cycle carbon neutral buildings.

Taking a product-based approach, enabled by a scalable and adaptable technology platform, they vertically integrate design-engineering. As a first, they use advanced robotics to assemble certified mid-to-high-rise ready mass timber building systems in an end-to-end process enabled by proprietary software technology.

Intelligent City achieves carbon neutrality and ESG compliance through a product that addresses embodied, operational, and behavioural GHG emissions.

They focus on mixed use housing and workspace solutions. Their core markets are situated in metropolitan areas on the Pacific Coast and Eastern Canada, where new urban densification development policies meet the needs for the '15-minute city', and coincide with recently adopted mid-to-high-rise mass timber regulation for 6-18 storey buildings, that their systems are already compliant with. Intelligent City has signed contracts of \$15M and a current project pipeline of over \$200M.

As a design-manufacturing company, they have successfully built proof buildings and completed extensive testing and certification of their core technologies. They opened their next generation automated factory in Delta BC at the end of 2021 and are gearing up for output by end of 2022.

A 9-storey mass timber Passive House compliant 51-unit rental housing project has obtained permits from the City of Vancouver and is scheduled to commence construction in downtown Vancouver in the next 6 months. They have raised \$30M to date.

### Why our venture should be considered one of Canada's 50 most investable cleantech companies:

Intelligent City is addressing 3 major issues: housing affordability, climate change, and the need for better urban housing and more resilient communities. They are offering an integrated solution consisting of generative design engineering and virtual twin, integrated mass timber cassette structural system, and high-performance Passive House building envelope façade panels.

They offer premium quality housing products that increase speed of project delivery by up to 38%, reduce cost by up 33%, and increase the number of homes in each density by up to 50%. Together with improvements in quality, adaptability, and longevity, Intelligent City achieves a major reduction in carbon emissions, creating a multi carbon win with 93% emissions reduction through the combination of carbon sequestered, ultra-low operational energy demand, and changing behavioral carbon.

In comparison to carbon intensive concrete buildings, Intelligent City offers full life cycle considerations and 90-year carbon neutrality, with compelling benefits for building owners and residents through ESG compliance.

[Pitch Video](#)

[Website](#)



BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Built Environment

### Leadership:

[Oliver Lang](#)

**Number of full time employee equivalents:**  
30 – Vancouver, BC

**Acceleration Programs:**  
Foresight Canada, MaRS for Cleantech Forum

### Awards and Recognition:

- Solar Impulse
- Breakthrough Energy Solutions Canada

### Non-dilutive Grant Funding:

- SDTC
- NRCan IFIT
- Next Generation Supercluster
- Breakthrough Energy Solutions Canada
- NRC
- CleanBC

**Grant Funding Raised (\$CAD):**  
\$14,700,000.00

**Investors:**  
BDC VC Cleantech Practice, Greensoil Proptech Ventures, UIT Funds, Fulmer and Company

**Most Recent Equity Capital Raise completed:**  
Series A (\$2M-\$20M)

**Dilutive Equity Funding Raised (\$CAD):**  
\$13,500,000.00

**Projected Revenues for 2022 (\$CAD):**  
\$750,000.00

**Planned Equity Raise:**  
Series B, Q3 2023, \$25M

# Klean Industries Inc

## Recovering Clean Energy & Resources from Waste

Klean Industries ("Klean") is an international company focused on applying best-of-class technologies that provide industrial symbiosis between energy, waste, and resources in a commercially viable and environmentally responsible manner.

Our primary focus is the recovery of resources found in hydrocarbon-containing waste streams such as end-of-life tires, scrap plastics, and municipal solid waste.

Over the 20 years, Klean Industries has continued to invest in building a portfolio of intellectual properties and know-how related to the development and creation of the circular economy in the waste and recycling sector.

More specifically, Klean Industries has developed a patent-protected process to recover valuable commodities from scrap tires.

Klean recovers carbon black and oil that is added back into the supply chain for the production of new tires, rubber, and plastics that significantly offset carbon emissions.

Klean is solving the enormous pressure on OEM markets for recovered commodities driven by new ESG and Industry-led demand globally.

### Why our venture should be considered one of Canada's 50 most investable cleantech companies:

In order to develop our solution portfolio and know-how we started out providing design build and engineering services to the waste to energy and recycling sector. This funded our growth over time which enable us to both acquire IP and develop it so that we can now build, own and operate facilities on a global basis either alone or in partnerships. We have done this without any Government support of any kind and have raise little outside equity over the past 18 years. As the marketplace has matured into the circular economy, Klean has become well recognized. Klean now reviews \$15B in deal flow annually and has a pipeline of projects that require capital that now exceeds \$5B. Alongside the application of resource recover technologies is the development of our SaaS patent pending platform known as the KleanLoop, a technology that is game changing in providing operation transparency within the resource recovery and waste recycling sector.

## COMPANY PROFILE

### Target Markets:

- Heavy Industry (Cement, Steel, Aluminum, Chemicals, Pulp & Paper...)
- Natural Resource Extraction (Mining, Forestry, Oil & Gas)
- Grid/Power/Utilities
- Transportation & Mobility

### Number of full time employee equivalents:

25 - Vancouver, BC

### Investors:

Scott Carley

### Most Recent Equity Capital Raise completed:

Seed (\$500k-\$2M)

### Dilutive Equity Funding Raised (\$CAD):

\$3,000,000.00

### Projected Revenues for 2022 (\$CAD)

\$30,000,000.00

### Planned Equity Raise:

Series A, \$75M-\$150M

[Pitch Video](#)

[Website](#)



BOOK A MEETING

# Korotu Technology Inc.

Korotu Technology is a carbon measurement social enterprise that helps communities protect the climate and biodiversity using remote sensing AI.

We are working with clients; including WWF-Canada, Microsoft, and some of the largest Land Trusts and Provinces in Canada, to understand and monitor the carbon in forests, using remote sensing technology from satellites, along with our in-house AI.

For example, we are assessing carbon across over 130 properties for one of the largest land trusts in the Maritimes.

This data on carbon helps our clients show the value of the protection already in place, and makes it easier to monitor the area for infringements, and to prioritise the highest impact areas to focus on for future protection.

## **Why our venture should be considered one of Canada's 50 most investable cleantech companies:**

Korotu founders Sean and Agata Rudd formed the company to provide the tools to support conservation groups and communities fund and protect nature. Our mission is to help local groups to contribute to the 30 by 30 goals by providing the measurement, monitoring, and funding nature. We are incorporated as a for-profit social enterprise as we believe that it the best option for building a scalable business to support our clients. We would be delighted to be included in the Canada 50 cleantech companies and to engage with investors who are seeking to make a positive difference to our planet.

[Website](#)

in

BOOK A MEETING

## **COMPANY PROFILE**

### **Target Markets:**

- Agrifood
- Information, Communications, and Technology Sectors
- Water
- Conservation Groups and Communities

### **Leadership:**

[Sean Rudd](#)

### **Number of full time employee equivalents:**

13 - Toronto, ON

### **Acceleration Programs:**

Foresight Canada

### **Awards and Recognition:**

- Finalist for WWF-Canada Nature-X-Carbon Tech Challenge

### **Non-dilutive Grant Funding:**

- WWF-Canada
- SR&ED
- Mitacs
- IDEA-FUND
- Province of Ontario
- SWPP
- RBC Tech for Nature

### **Grant Funding Raised (\$CAD):**

\$250,000.00

### **Projected Revenues for 2022 (\$CAD)**

\$500,000.00

### **Planned Equity Raise:**

Yes



LIGHTLEAF

# LightLeaf Solar Ltd.

Solar Energy that Moves You

A global sea-change is underway - the electrification of transport. LightLeaf is part of this wave by making high-performance solar panels for things that move - RV, marine, automotive, and aerospace. We have achieved market dominance in our first niche market, and are poised to roll out our proprietary technology into the large untapped markets of Marine and Transportation solar. Adding solar to things that move provides many user and OEM advantages, including increased vehicle range, longer independent operation, lighter weight, and better aesthetics.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

LightLeaf Solar is growing rapidly, enabling us to ride the wave of transportation electrification. We have more than tripled our production capacity, quadrupled our revenue year over year, secured raw materials to make over 1000 panels, and are expanding with prototypes for the automotive and marine industries.

## COMPANY PROFILE

### Target Markets:

- Transportation & Mobility

### Leadership:

[Richard Retzlaff](#)

### Number of full time employee equivalents:

13 - Saskatoon, SK

### Acceleration Programs:

Foresight Canada

### Non-dilutive Grant Funding:

- NRC IRAP

### Grant Funding Raised (\$CAD):

\$240,000.00

### Investors:

Startup TNT

### Most Recent Equity Capital

#### Raise completed:

Pre-seed (Up to \$500k)

### Dilutive Equity Funding

#### Raised (\$CAD):

\$316,000.00

### Projected Revenues for 2022

#### (\$CAD)

\$850,000.00

### Planned Equity Raise:

\$650k Pre-seed round in Q4 2022 and \$2M Seed round in 2023

[Pitch Video](#)

[Website](#)

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BOOK A MEETING





# Livestock Water Recycling

High-tech digital manure processing that enables net-zero food production and increases food for the supply chain.

Manure massively impacts air, water, and soil quality; animal and employee health; and farm profitability. Manure's fertilizer value is impeded by the dilute nature of these liquids and the co-mingling of the nutrients.

Operating at the intersection of Agriculture, Water, and Energy, LWR's data-driven technology reduces manure volume and unlocks the exciting profit dynamics trapped inside storage lagoons by converting manure into two distinct, high-value fertilizers, concentrated biogas feedstock, and recycled clean water. LWR's unique approach to particle separation can combine with anaerobic digestion to assist even smaller farms to become carbon negative energy producers! This increases food production for the supply chain at net-zero carbon emissions while increasing crop yields, improving animal health, and optimizing farm resources.

A \$100B total market opportunity in the US, the EU and the Middle East includes an \$8B target market of biogas developers, dairy and hog producers, beef cattle feedlot operations, and food production facilities.

Processing manure immediately reduces ghgs, including methane, CO2, and nitrous oxide, and when combined with an Anaerobic Digester, reduction is up to 82% - directly improving air quality! Transforming 75% of manure into clean water reduces groundwater withdrawals. More control over nutrients helps to eliminate the degradation of aquatic ecosystems. Soils are regenerated through the precise application of the nutrients, organics, and microbes found in manure, and soil compaction is reduced. Land use is improved by transforming storage lagoons into cropland. Many of these impacts are quantified by on-system sensors, providing access to carbon, water, and ecosystem markets.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

With skyrocketing fertilizer prices, a booming renewable natural gas sector, and consumer trends towards transparency and authenticity, manure is one of the most exciting and significant opportunities on the planet! In the Fall of 2022 LWR is launching a \$5M equity round for growth and scaling activities including developing existing and new markets and launching IP to double revenue each year over the next three years. This is forecasted to grow revenues from \$7.5M in March 2022 to annual revenues of over \$60M. LWR is planning annual growth in North American with expansion into Europe, Asia and the Middle East through a network of carefully curated dealers and distributors. LWR has validated their award-winning platform with systems operating in the US for 5+ years. They have an ongoing equipment revenue stream, recurring subscription revenue, a backlog of \$8M, and a massive pipeline of sales opportunities of over \$150M. In 2022 following a 15-month long assessment performed by external independent experts based on verified standards, the Solar Impulse Foundation determined that the PLANT system meets high standards in profitability and sustainability and awarded them with the Solar Impulse Efficient Solution Label. LWR's approach to manure treatment achieves triple-bottom-line outcomes: meeting the growing demand for food, increasing farmer profitability, and protecting the environment and public health. As the first company in the world to digitize manure, LWR is building the manure economy and increasing producer transparency for the consumer with commercialized systems operating in the USA, the Middle East, and the UK.

[Pitch Video](#) [Website](#) [Twitter](#) [LinkedIn](#) [Facebook](#) [Instagram](#)

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Water
- Grid/Power/Utilities
- Agrifood
- Natural Resource Extraction (Mining, Forestry, Oil & Gas)

### Leadership:

[Karen Schuett](#)

### Number of full time employee equivalents:

18 - Calgary, AB

### Acceleration Programs:

Foresight Canada, Canadian Technology Accelerator: AgTech Oct 2022, MaRS Momentum

### Awards and Recognition:

- World Ag Expo
- Solar Impulse Label
- Clean50
- AgTech Breakthrough Predictive Analytics Solution of the Year
- Nutrien Radicle Challenge
- Thrive Forbes Innovation Icon
- Water's Next Award
- Dairy Herd Management Top 10 Product Innovation Award
- Profit 500 List of Canada's Fastest-Growing Companies
- Deloitte Fast 50 Award
- Air Miles® Innovation of The Year Award
- 3m Environmental Innovation
- Deloitte Technology Green 15
- Telus And Globe & Mail Small Business Challenge Contest
- Dairy Herd Innovation Award
- Emerald Award
- Dr. F.X. Aherne Award

### Non-dilutive Grant Funding:

- NRC IRAP
- SR&ED
- Alberta Innovates
- CanExport
- Alberta Export Expansion Program

### Grant Funding Raised (\$CAD):

\$1,146,613.00

### Investors:

BDC Cleantech, Emmertech, Nutrien/Radicle Growth, SVG Ventures

### Most Recent Equity Capital

#### Raise completed:

Seed (\$500k-\$2M)

### Dilutive Equity Funding

#### Raised (\$CAD):

\$3,650,000.00

### Projected Revenues for 2022 (\$CAD)

\$16,000,000.00

### Planned Equity Raise:

\$6-8M Equity round in Fall 2022



LlamaZOO

# LlamaZOO

## Spatial BI through Digital Twinning and enablement of the Industrial Metaverse

LlamaZOO's Spatial Business Intelligence Platform (SBI Platform) facilitates the creation of highly accurate and data rich digital twins of various scales (indoor/outdoor, millions+ km2 land scale) and types, for different industries including Natural Resources, Manufacturing, Indigenous Lands Management, and ESG.

Digital Twins created on the SBI Platform are manifested as 3D virtual worlds, which visualize data spatially and allow users (stakeholders) to connect to and co-exist with the data through a real-time interactive, multiplayer like gaming interface, with easy to use data import, analysis, and presentation tools.

By transforming data into clear and intuitive 3D worlds that are immediately recognizable and familiar, where everyone, regardless of skill or discipline, can collaborate and contribute effectively, LlamaZOO Digital Twins are used to enhance communication, collaboration, and coordination of capital intensive assets.

From planning, regulatory assessment and approval, through construction, and into live operations and eventual closure and reclamation, LlamaZOO Digital Twins are used throughout the asset lifecycle to achieve stakeholder alignment and engagement, derive operational and planning insights, and even train AI models and simulate future outcomes - saving organizations millions of dollars annually.

With 80% of the world's big data being spatial, the majority of BI tools being 2D, and most organizations only analyzing 12% on average the data they already have - a next generation of analysis tools are necessary to unlock the world's most valuable resource (data). This imperative is what drives LlamaZOO in developing the most advanced Spatial Business Intelligence platform, and creating the onramp for the Industrial Metaverse.

### Why our venture should be considered one of Canada's 50 most investable cleantech companies:

We are working with over 20 First Nations across Canada to enable and accelerate their adoption of Spatial BI to enable their advanced stewardship of the land. We have digitized and made available over 50 million hectares of land based digital twins, which are being used for carbon sequestration and offset planning, better environmental land-use, reducing unnecessary travel to site, and optimizing the engineering of cut-blocks for forestry which reduces cutting and costly/invasive road building. In manufacturing we reduce the waste in product output in the Aerospace sector, lowering labour, materials, and energy costs/consumption. We're also working with the largest IoT OEM for buildings and facilities management to provide an interface for enabling and accelerating efficiencies around building energy use (the largest contributor in global green house gases). LlamaZOO's technologies started in enabling efficiencies in the mining and education space, but have grown to be used in a large cross section of heavy industries to cut costs, reduce waste, and reduce and in some cases eliminate environmental impacts.

[Pitch Video](#)

[Website](#)



BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Grid/Power/Utilities
- Built Environment
- Natural Resource Extraction (Mining, Forestry, Oil & Gas)
- Heavy Industry (Cement, Steel, Aluminum, Chemicals, Pulp & Paper...)
- Defence/Military

### Leadership:

[Charles Lavigne](#)

### Number of full time employee equivalents:

30 - Victoria, BC

### Acceleration Programs:

Foresight Canada, startAD, VIATEC VAP

### Non-dilutive Grant Funding:

- Digital Supercluster
- NRC IRAP
- SR&ED
- IDMTC
- NRCan
- InnovateBC Ignite

### Grant Funding Raised (\$CAD):

\$2,000,000.00

### Investors:

RockPile Ventures

### Most Recent Equity Capital Raise completed:

Seed (\$500k-\$2M)

### Dilutive Equity Funding Raised (\$CAD):

\$2,000,000.00

### Projected Revenues for 2022 (\$CAD)

\$2,000,000.00

### Planned Equity Raise:

Currently raising seed bridge: \$3M. Series-A in Spring 2023: \$10M



**Lucent Bio**

# Lucent BioSciences

Higher yields. Healthier soil. The ultimate return.

Lucent Bio delivers crop nutrition that improves yield and soil health while sequestering carbon. Farmers are currently being challenged to meet the needs of the present without compromising the ability of future generations to meet their own needs. Backed by years of research and development, Lucent Bio is proud to provide industry-leading solutions for climate-smart agriculture.

Lucent Bio has developed novel climate-positive crop nutrition products to help farmers boost their short-term profitability and facilitate long-term stewardship of farmland and natural resources. Lucent Bio's flagship, Soileos, is a soil-applied smart fertilizer that enhances yields, crop resilience, and soil health with on-time nutrient delivery and sustained bioavailability. This allows the crop to maximize its genetic potential. Their technology binds nutrients to cellulose fibre and uses the soil's natural biological activity to deliver them to crops instead of synthetic molecules. The cellulose fibre comes from agricultural residues such as pea and lentil hulls.

Crops grown with Soileos benefit the environment by increasing soil organic carbon levels. Their proprietary manufacturing process is backed by green chemistry and takes steps to achieve sustainable, circular management of resources. Compared to conventional products, Soileos uses less water, less energy, and emits fewer air pollutants and greenhouse gases. Soileos is more than climate neutral, it's a climate-positive micronutrient delivery technology.

Using Soileos increases revenues for farmers and food processors and provides a novel, sustainable solution for micronutrient management that is compatible with modern farming practices.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

In 2022 Lucent Bio contracted two independent consultants to investigate the environmental footprint of manufacturing and using Soileos Zinc compared to convention products. It was found that on a per tonne of fertilizer produced basis, Soileos-Zn has less of an environmental footprint than both Zn-EDTA and Zn-Oxysulfates. The GHG footprint of Soileos-Zn is estimated to be 1.6 t CO<sub>2</sub>e/t of Soileos produced.

Canola grown with 1 tonne of Soileos in Saskatchewan sequesters the equivalent of 150 trees growing for 10 years.

[Website](#)    

[BOOK A MEETING](#)

## COMPANY PROFILE

### Target Markets:

- Western Canadian Farmers

### Leadership:

[Michael Riedijk](#)

**Number of full time employee equivalents:**  
29 - Vancouver, BC

### Acceleration Programs:

Foresight Canada, Cultivator SVG Thrive, Singapore Slingshot Foodbytes by Rababank

### Awards and Recognition:

- Canada's Farm Show - Innovation of the year
- Ag In Motion - Runner Up, Product of the year

### Non-dilutive Grant Funding:

- Protein Industries Canada x 2
- SR&ED
- NRC IRAP
- BC Agritech Grant
- SFU Sandbox
- NSERC Engage
- AAFC Cleantech Program

**Grant Funding Raised (\$CAD):**  
\$22,000,000.00

### Investors:

Emmertech, Amathaon

**Most Recent Equity Capital Raise completed:**  
Series A (\$2M-\$20M)

**Dilutive Equity Funding Raised (\$CAD):**  
\$12,000,000.00

**Projected Revenues for 2022 (\$CAD):**  
\$1,000,000.00

**Planned Equity Raise:**  
Series A in January

# MarineLabs Data Systems

MarineLabs is a coastal intelligence company and real-time data provider, transforming marine safety and building climate-resilient coastlines.

MarineLabs is a coastal intelligence company and real-time data provider, transforming marine safety, and building climate-resilient coastlines. Founded in 2017, they're a B.C.-based company offering the world's highest resolution real-time wind, wave, and weather data as well as AI-driven insights from fleets of cloud-connected, rugged instruments.

This data optimizes port and vessel operations; and long term data insights help communities prepare and adapt for coastal flooding and other hazards due to sea level rise and climate change driven weather volatility. Marine condition data and insights are made available to ports, maritime operators, and coastal communities through the CoastAware™ subscription service.

MarineLabs eliminates barriers to acquiring and accessing data as its customers don't need to be experts in marine buoy operations, they simply subscribe to the data feeds.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

MarineLabs continues to lead the way with proprietary technology providing real-time coastal intelligence data that helps marine operators to assess risk and reduce the likelihood of accidents.

The company continues to see year-over-year revenue growth, true profitability, and long term contracts with monthly recurring revenue nearing six figures. Their partnership with Kongsberg Marine, a giant in the shipping industry, to provide BerthWatch(TM) will open doors to thousands of customers worldwide and add a new vertical to our sales pipeline.

Their combination of engineering expertise and strategic partners makes MarineLabs poised for explosive growth in the next sixteen months.

## COMPANY PROFILE

### Target Markets:

- Water
- Transportation & Mobility
- Ocean Data as a Service

### Leadership:

[Scott Beatty](#)

### Number of full time employee equivalents:

9 - Victoria, BC

### Acceleration Programs:

Foresight Canada

### Awards and Recognition:

- BC Cleantech Awards, Rising Star (2022)
- Greater Vancouver Board of Trade: Business Reinvention Awards (2021)
- Regional TAP Export Plan

### Non-dilutive Grant Funding:

- NRC IRAP
- SR&ED
- NRCan

### Grant Funding Raised (\$CAD):

\$742,000.00

### Investors:

Joshua McKenty

### Most Recent Equity Capital Raise completed:

Pre-seed (Up to \$500k)

### Dilutive Equity Funding Raised (\$CAD):

\$45,000.00

### Projected Revenues for 2022 (\$CAD):

\$1,385,000.00

### Planned Equity Raise:

12-16 months, Seed Round, \$3-\$5M



# NanosTech

A catalyst for change

NanosTech is a successful spin-out from the University of Calgary's Ingenuity Centre for In-Situ Energy (AICISE). The company is a Canadian innovation powerhouse with highly adaptable advanced nanocatalyst technology. They have developed multiple nanocatalyst product solutions to reduce greenhouse gases and promote environmental stewardship. Their most notable products include the company's hallmark Catalyst technology In Situ Upgrading Technology (ISUT), recently launched Oxidative DESulfurization-Stream Assisted (ODESSA) technology and has international traction for their NOVA catalyst platform for upgrading renewable oils.

NanosTech is Alberta's catalytic innovation hub, supporting the development of process technologies and supplying catalysts to other clean tech companies leading the energy transition in Canada.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

For Canada to achieve the lofty 2030 sustainability goals outlined by the United Nations, it must transition the traditional energy sector to be more sustainable while simultaneously developing renewable technologies. NanosTech's innovative and highly adaptable nanocatalyst technology can help the nation achieve both these criteria and is projected to be an essential part of aligning established corporations with new policies and regulations being rolled out in domestic and global energy markets. As an organization, Nanos is built on a solid technical foundation, holding over 20-patent technologies for various catalytic-enabled technologies. They intend to incorporate these technologies into a catalytic hub, rightfully named CatHub. CatHub will not only be the first of its kind within Canada but has the potential to create hundreds if not thousands of jobs within the hub itself, but even more through the successful spin-out of catalytic-enabled technologies into new companies.

[Pitch Video](#)

[Website](#)

[in](#)

[BOOK A MEETING](#)

## COMPANY PROFILE

### Target Markets:

- Natural Resource Extraction (Mining, Forestry, Oil & Gas)

### Leadership:

[Myles M. McGovern](#)

### Number of full time employee equivalents:

21 - Calgary, AB

### Acceleration Programs:

Punch and Play

### Non-dilutive Grant Funding:

- Winner of 2021 Alberta Innovates Best Net-Zero Company

### Non-dilutive Grant Funding:

- NRC IRAP
- NRCan

### Grant Funding Raised (\$CAD):

\$200,000.00

### Investors:

Vorsana Environmental

### Most Recent Equity Capital Raise completed:

Seed (\$500k-\$2M)

### Dilutive Equity Funding

**Raised (\$CAD):**

\$2,000,000.00

### Planned Equity Raise:

Currently raising

# NULIFE GreenTech

## Transforming industrial wet waste into carbon negative fuel and carbon credits

Disposing of industrial wet wastes is becoming more expensive and restrictive. NULIFE's patented process transforms industrial wet wastes into carbon negative bio-crude oil and biochar which can sequester carbon or be upgraded to renewable transportation fuels to meet Canada's Clean Fuel Standard. Sequestration generates Co2 removal certificates; for which they have a Letter of Intent to purchase their outputs and credits. They are developing an MOU with a Canadian renewable fuel refinery.

Their technology differentiation is with wet feedstocks such as sewage sludge. Environmental benefits include GHG reduction of up to 1.2T CO2e per dry ton processed; landfill diversion and bio-crude with a CI score range of -44 to -74g CO2eq/MJ. (LCA updated August, 2022).

Industry feedback is resounding: Disposing of industrial wet wastes, like sewage sludge is becoming more expensive and restrictive. ESG mandates, bans on landfilling and land-spreading plus the escalating price on carbon are all driving interest in NULIFE's solution.

The size of the North American sewage sludge market alone is 66MT; presenting a multi-billion dollar market with no dominant player.

They are in the commercial demonstration phase: a 4500sqft facility houses their 1 ton/day pilot unit.

Traction includes LOI's & paid pilot testing; they have 75% of their current equity raise secured and runway to complete next milestones. Co founders are serial entrepreneurs who have started, scaled, and exited 6 companies worth \$30M. They have the team and experience to execute this opportunity.

### **Why our venture should be considered one of Canada's 50 most investable cleantech companies:**

NULIFE are actively engaged with multiple parties to secure a launch customer (feedstock supplier) both in Canada and the United States. They have an LOI for all of their outputs.

One example is in New York State. Through their relationship with the Canadian Trade Commission, they were introduced to NYSERDA and their EIRs. They quickly identified an exciting opportunity in upper New York State and forged a relationship with the manager of a WWTP which is currently is landfilling 100,000 tons a year of sludge.

NULIFE is now in active discussions; they are testing waste and have identified the value proposition for them: reduced tipping fees, reduced transportation and chemical costs, and reduced emissions (estimate of 31,500t CO2e/yr). Competitive solutions like landfilling, anaerobic digestion and combustion require higher costs and emissions. Their competitive advantage is with wet waste streams. Their bus model is a localized hub & spoke, leveraging our 1st mover advantage. They get paid at front end to accept the waste and sell the outputs and credits. There are 55 WWTP in the region. They are not asking the county for any investment or up-front money. Lastly, they have one Canadian patent granted and their U.S. patent has just been approved.

[Website](#)

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BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Water
- Agrifood
- Built Environment
- Heavy Industry (Cement, Steel, Aluminum, Chemicals, Pulp & Paper...)
- Carbon Removal/ Sequestration

### Leadership:

[Jerry Kristian](#)

### Number of full time employee equivalents:

7 – Saskatoon, SK

### Acceleration Programs:

Foresight Canada, Cascadia, Repsol Fundacion, CTA

### Awards and Recognition:

- Repsol Fundacion
- Distiller's Award from Cascadia

### Non-dilutive Grant Funding:

- Repsol
- NRC IRAP
- SR&ED
- Supercluster
- Mitacs
- NSERC
- Ag Can
- SAVI & Product 2 Market

### Grant Funding Raised (\$CAD):

\$2,474,719.00

### Investors:

Barry Remai

### Most Recent Equity Capital Raise completed:

Seed (\$500k-\$2M)

### Dilutive Equity Funding Raised (\$CAD):

\$762,000.00

### Projected Revenues for 2022 (\$CAD):

\$28,000.00

### Planned Equity Raise:

Series A -\$12M-\$16M



# Nyoka

We engineer proteins that create light.

At Nyoka, we engineer proteins that create safe, sustainable, and efficient light. Our mission is to take over and expand the toxic \$9B+ chemiluminescence industry in market applications ranging from the military, marine, mining, safety, entertainment, aerospace, research, and more. We've worked with NASA, Stellantis and more. We are currently launching our first product, a biodegradable fishing lure for commercial fishermen, to prevent ghost gear, single-use plastic, and toxic waste from entering our oceans - with over \$500,000 in customer demand. We're raising our pre-seed round to build our manufacturing capacity to ship our flagship product to our waiting customers.

**Why our venture should be considered one of Canada's 50 most investable cleantech companies:**

Our technology will change the world. Nyoka's mission is to preserve life on earth. This won't be possible unless the 1.5 million tonnes of carcinogenic chemiluminescent waste produced every year is eliminated from the world - and this will only be possible with our technology. Our first product is a marine-biodegradable, instant-activation in water, and an unlimited depth-rating that has applications in commercial fishing, diving, mining, and naval-defense.

Our target market is certified sustainable commercial-fishing companies who will be mandated to use biodegradable fishing equipment within the next 3 years. This recent policy change gives us a target market of \$75+ million in annual recurring revenue, which puts us in unicorn territory.

This is just the start. We have developed a platform technology with valuable applications in many industries including aerospace, food & beverage, events, diagnostics, emergency response, and more. With a clear go-to market, great team, and dedicated investors. We are a SOSV climate tech top 100 global company, and we were explicitly highlighted as a 'disruptor' in an industry report on chemiluminescence.

Nyoka's team has demonstrated success across every essential metric. Our science team's ongoing protein engineering has increased product performance from 5 minutes to 48 hours, the engineering team has developed a product with 80% profit margins, and our sales team has brought in over \$500,000 USD in customer intent within the past 3 months.

We have inbound interest, repeat customers, and paid pilots with some of the biggest companies in the world including NASA, Stellantis, Stanford, BMW, and more.

[Pitch Video](#)

[Website](#)



BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Commercial Fishing
- Emergency, Search and Rescue
- Aerospace
- Consumer

### Leadership:

[Paige Whitehead](#)

### Number of full time employee equivalents:

7 - Vancouver, BC

### Acceleration Programs:

Indie Bio, UBC HATCH Venture Builder, Creative Destruction Labs

### Awards and Recognition:

- New Ventures BC Top BC Tech Company

### Non-dilutive Grant Funding:

- SDTC
- NRC IRAP
- BioTalent

### Grant Funding Raised (\$CAD):

\$1,036,000.00

### Investors:

Indie Bio, Brickyard VC

### Dilutive Equity Funding Raised (\$CAD):

\$345,000.00

### Projected Revenues for 2022 (\$CAD):

\$200,000.00

### Planned Equity Raise:

Currently raising \$1M, \$3.5M Seed round in 2024



# Open Ocean Robotics

Protecting Oceans Sustainably

Open Ocean Robotics is at the leading edge of robotics-as-a-service for all meaningful markets in the blue economy. Delivering robotic services for defence, commercial, and scientific markets, they have demonstrated revenue recognition in multiple markets and distinctive technology. Zero-emission, quiet, and capable of anywhere anytime operations, their solar powered uncrewed surface vehicles (USVs) provide safe, affordable, and sustainable ocean monitoring solutions. They are pioneering and scaling robotic solutions to digitize planet ocean and sustainably grow the \$2.5 trillion blue economy.

## Why our venture should be considered one of Canada’s 50 most investable cleantech companies:

Open Ocean Robotics have won multiple competitive bids for their technology in Canada and the US, and were just selected for a US government contract over 20+ of the leading global marine robotic solutions.

## COMPANY PROFILE

### Target Markets:

- Water
- Defence/Military
- ICT Sectors
- Offshore Energy, Environmental Monitoring

### Leadership:

[Julie Angus](#)

### Number of full time employee equivalents:

30 - Victoria, BC

### Acceleration Programs:

Foresight Canada, MaRS, CDL, Alacrity, SeaAhead, Greentown Labs

### Awards and Recognition:

- Foresight 50 (2021)
- Global Cleantech 50
- Solar Impulse
- BC Innovator of the Year
- BC Cleantech Awards Icon

### Non-dilutive Grant Funding:

- NRC IRAP
- SR&ED
- SDTC
- BC-ICE
- NRCan
- Ocean Supercluster

### Grant Funding Raised (\$CAD):

\$6,500,000.00

### Investors:

Rhiza Capital, Social Innovation Fund, Cindicates, Nelson Investments, Something Good Ventures

### Most Recent Equity Capital Raise completed:

Seed (\$500k-\$2M)

### Dilutive Equity Funding Raised (\$CAD):

\$1,700,000.00

### Projected Revenues for 2022 (\$CAD):

\$1,100,000.00

### Planned Equity Raise:

\$10M round

[Pitch Video](#) [Website](#)    

BOOK A MEETING



# OptiSeis Solutions Ltd.

## High Resolution Seismic Imaging Enabling the New Energy Economy

OptiSeis' high resolution, 3D seismic analysis enables:

- safe, efficient and effective alternative energy projects such as geothermal and windfarm placement
- mining of critical minerals and exploration for gases for the energy transition including lithium and helium;
- clean tech applications such carbon capture, utilization and storage (CCUS); as well as
- reduced environmental footprint and GHG emissions for the traditional energy economy.

OptiSeis' technology results in more than 55% reductions in land footprint and GHG emissions in comparison to current best in class seismic alternatives all while providing accurate subsurface imaging for safe and efficient resource development.

The seismic market is a multi-billion-dollar industry in North America alone. In the US, the seismic exploration market for just oil and gas totalled \$774MM in 2019. Carbon capture and sequestration investment in the US is forecast to total over \$2 billion annually. Seismic imaging is a necessity to enable identifying and monitoring reservoirs for CO2 storage.

With EcoSeis, companies can focus on their environmental, GHG, and subsurface imaging targets while delivering on their net-zero goals to provide environmentally sustainable and reliable energy and resources for generations to come.

### Why our venture should be considered one of Canada's 50 most investable cleantech companies:

We have completed full technical validation of our technology and are currently acquiring a pilot with our project collaborators: Canadian Natural, Cenovus Energy Inc., Conoco Phillips Canada Resources Corp., Imperial Oil Ltd., and Suncor Energy. The project is also sponsored by CRIN, NRC IRAP, Alberta Innovates, and PTAC-AUPRF.

[Website](#)

[in](#)

[BOOK A MEETING](#)

## COMPANY PROFILE

### Target Markets:

- Clean Energy
- Natural Resource Extraction
- Built Environment

### Leadership

[Andrea Crook](#)

### Number of full time employee equivalents:

10 - Calgary, AB

### Acceleration Programs:

Foresight Canada, Rhyze-Up! Innovation Guelph

### Awards and Recognition:

- 2023 CSEG Symposium Honouree
- 2021 COSIA Land Challenge runner-up

### Non-dilutive Grant Funding:

- CRIN
- NRC IRAP
- Alberta Innovates
- PTAC-AUPRF

### Grant Funding Raised (\$CAD):

\$4,750,000.00

### Projected Revenues for 2022 (\$CAD):

\$750,000.00

### Planned Equity Raise:

First Round in Early 2023





PERMALUTION

# Permalution

## Fog and cloud water collection technology and innovation

Permalution works on fog and cloud water collection technology and climate adaptation solutions. As rain is vertical precipitation, fog or clouds are horizontal precipitation and we can get up to three times more water than rain.

Our team of world-class researchers has developed our technology comprising three units: The fog atlas, the water radar, and the fog collectors. The only technology in the market ready to assemble, fireproof, IoT integrated, and able to collect from 150-400 litres per day per unit.

We are more affordable than desalination plants, more efficient than rainwater collection, and safer than groundwater extraction.

In the near future, we want to become a water service provider adopting a recurring revenue model, and also enter the carbon trading market through our conservation and carbon reduction projects.

### Why our venture should be considered one of Canada's 50 most investable cleantech companies:

We received an additional 75K after the investment prize at startup fest. The BDC offered an investment of 300K instead of 100K. We have established an initial production plant, and we are preparing our upcoming fundraising round.

## COMPANY PROFILE

### Target Markets:

- Water
- Carbon Trading

### Leadership:

[Tatiana Estevez](#)

### Number of full time employee equivalents:

3 - Sherbrooke, QC

### Acceleration Programs:

Foresight Canada, ACET, Earth Tech, Venture Labs, Google for Startups SDG

### Awards and Recognition:

- Best Women in Tech Investment, Startup Fest 2022
- BMO Women in Business Award (2022)

### Grant Funding Raised (\$CAD):

\$108,000.00

### Investors:

The Firehood, the BDC

### Most Recent Equity Capital Raise completed:

Pre-seed (Up to \$500k)

### Dilutive Equity Funding Raised (\$CAD):

\$250,000.00

### Projected Revenues for 2022 (\$CAD):

\$100,000.00

### Planned Equity Raise:

Yes

[Pitch Video](#)

[Website](#)

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BOOK A MEETING

# Planetary Technologies

## Mine waste to carbon removal

Today, 83% of global GHG emissions are covered by a net-zero pledge by countries, regions, cities, and companies. This is driving the demand for high-quality carbon removal credits. By 2030, a supply shortage of up to 450 million carbon credits is forecasted, representing a \$50B market.

Planetary's ocean-based carbon removal approach uses existing infrastructure and resources to accelerate the supply of high-quality, durable carbon removal credits.

They extract minerals from mine tailings and electrochemically convert them to a pure form of antacid for the ocean. They distribute this antacid through existing permitted coastal outfalls where it reacts with dissolved CO<sub>2</sub> in the surface ocean, forming bicarbonates, a natural component of seawater. This reduces ocean acidification and removes carbon from the atmosphere for millennia.

By-products of their mineral extraction process include remediating mine waste and removing valuable metals such as nickel and cobalt while producing green hydrogen. At scale, this allows Planetary Technologies to offset the cost of carbon removals to below \$75/tonne.

## COMPANY PROFILE

### Target Markets:

- Carbon Removal (Climate technology)

### Leadership:

[Mike Kelland](#)

### Number of full time employee equivalents:

15 - Dartmouth, NS

### Acceleration Programs:

Canada Clean Tech Accelerator, Carbon to Value, Creative Destruction Lab

### Awards and Recognition:

- Global Cleantech Top 50 to Watch (2020)
- Forbes 30 under 30 (Co-founder)
- XPRIZE Carbon Removal Milestone Award

### Non-dilutive Grant Funding:

- NRC IRAP
- Emissions Reduction Fund
- Greenhouse Gas Reduction Fund (UK)
- Ocean Startup Project

### Grant Funding Raised (\$CAD):

\$4,000,000.00

### Investors:

Apollo Projects, Innovacorp

### Most Recent Equity Capital Raise completed:

Seed (\$500k-\$2M)

### Dilutive Equity Funding Raised (\$CAD):

\$4,200,000.00

### Planned Equity Raise:

Q2 2023, Series A, \$25M



# Proteus Waters

Experience & expertise to build/own/operate standardized, packaged sewage plants (convert sewage into water/fertilizer/char)

Proteus has experience & expertise in circular/cleantech wastewater treatment, recovery & reuse. We convert raw sewage into clean water & fertilizer. Our team, technology and past projects are globally recognized. Our technology is leading edge & proven (2 operating plants making revenue for over 4 years).

Our core customer is Sewage Hauler Businesses (e.g. GFL) that dispose sewage at our site and get charged tipping fees (subscriber based membership that pays based on disposal volumes). Our key competitor is the local city sewage plant that is overloaded with the sewage hauler business boom. Key customer value we deliver includes lower tipping fees, load mixing, higher toxicity acceptance, elimination of load exceedance fines, higher customer service & ESG cooperative marketing, and ESG impacts to the surrounding community.

Compared to traditional sewage plants, we create reusable water & fertilizer, stop pollution & stop green house gases. Our technology is essentially a "stand-alone sewage processing station". It is decentralized, automated and uses membranes. Our treatment quality is 10x higher & 10x smaller footprint than traditional systems. We manufacture our equipment (avoiding construction) within a series of interconnected 40 foot shipping containers (low-cost, easy logistics, modular). Our standardized stations come in 5 sizes based on the customer membership base.

We are seeking investors to own/operate clusters of Stations. We have multiple investment cluster projects available in Western Canada starting ready to start in Jan, 2023. We have a highly recognized structured Management System that enables us to scale across Canada and internationally.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

Water is an exciting and fast growing industry in areas of public attention, government support, human health, economic development, national security and environmental sustainability. Example highlights of the strengths of Proteus include our culture and team. Proteus is proud to have, maintain and grow in areas of: purpose, healthy scars, persistence, experience, expertise and leading/like-minded peers and diverse references. We leverage custom/globally recognized in-house project management systems to deliver an advanced circular economy technology and profitable business model including social-well being that aligns with formal frameworks. We impact national community economics, environment & private customers by stopping things not well-known or actively being addressed (crisis ready to boil over). Key impacts are stopping pollution & reducing legal/insurance risks & claims. Our business model has taken years to establish and refine and is extremely innovative, strategic, simple, scalable and sustainable. We have exceeded expectations with two operating plants. An investor will get payback of upfront investment in less than 7 years and retain equity of a semi-monopoly based Utility that is low-risk, long-term with multiple secondary profitable off-takes. We thank you very much for your time and interest.

[Website](#)

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Water
- Built Environment
- Sewage Truck Hauling Businesses (e.g. GFL)

### Leadership:

[Jason Tratch](#)

### Number of full time employee equivalents:

6 - Saskatoon, SK

### Acceleration Programs:

Foresight Canada

### Awards and Recognition:

- Clean 50 (Jason Tratch)
- Construction of the Year
- SABEX
- ABEX

### Non-dilutive Grant Funding:

- NRC IRAP
- SR&ED
- MITACS

### Grant Funding Raised (\$CAD):

\$110,000.00

### Investors:

AgWest Bio, Shawn Beamish

### Most Recent Equity Capital Raise completed:

Seed (\$500k-\$2M)

### Dilutive Equity Funding Raised (\$CAD):

\$2,012,400.00

### Projected Revenues for 2022 (\$CAD):

\$50,000.00

### Planned Equity Raise:

\$7M-\$10M in early 2023



# Psigryph Inc.

Foodtech for Health

Psigryph owns Nanopect™, a platform, biodegradable nanodelivery system for living cells. It consists of elongated nanofibers and spherical nanoparticles that are useful in different applications.

Nanopect™ permits efficient loading and delivery of a large volume of molecules like nutrients from fruits/vegetables, vitamins, pharmaceuticals, etc. to cells. This is possible due to; the very small size of the technology; nanostructures are made of carbohydrates; and the proprietary molecular structure of Nanopect™. The company is preparing to launch a dietary supplement in the US called Cholestello and is working on GHG reducing animals feed, fertilizers, and biopesticides in the lab.

### Why our venture should be considered one of Canada’s 50 most investable cleantech companies:

Psigryph has significant interest from several global players interested in improving their environmental footprint and health promoting products. They have been to several invitation-only pitch events on the campuses of major European companies.

## COMPANY PROFILE

### Target Markets:

- Agrifood

### Leadership:

[Sean Thompson](#)

**Number of full time employee equivalents:**  
5 - Guelph, ON

### Acceleration Programs:

Foresight Canada, Impact8-PEC, Innovation Guelph, Accelerator Guelph & Mass Challenge Switzerland (Oct 2022)

### Awards and Recognition:

- Mass Challenge Switzerland Global Finalist (2022)

### Non-dilutive Grant Funding:

- NRC IRAP
- SDTC
- OBIO
- Mitacs
- IDEA Fund
- OMAFRA

**Grant Funding Raised (\$CAD):**  
\$997,000.00

### Investors:

OCI Market Readiness Fund

**Most Recent Equity Capital Raise completed:**  
Seed (\$500k-\$2M)

**Dilutive Equity Funding Raised (\$CAD):**  
\$550,000.00

**Planned Equity Raise:**  
Raising \$10M USD Series A

[Website](#)

BOOK A MEETING



# SeeO2 Energy

Turning emissions into value. Closing the Carbon loop.

SeeO2 Energy is a clean-tech company incorporated in 2018. SeeO2's technology, which is built on solid oxide electrolysis cells and a proprietary high-performance low-cost electrocatalyst material, can selectively electrolyze CO2 to CO, water to H2, as well as co-electrolyze water and CO2 to produce syngas. The platform technology was originally developed in the research laboratories of Professor Viola Birss at the University of Calgary. At SeeO2, we provide our customers in the utilities, oil and gas, green plastic, metal processing, and chemical space with a reliable and an on-site solution to convert their waste CO2 emissions into clean fuels and chemicals using our patented technology in a net negative carbon process. The technology is well suited for "on-demand" production of industrial gases (CO, H2, and syngas), eliminating the need for large storage and transportation of these gases

**Why our venture should be considered one of Canada's 50 most investable cleantech companies:**

In 2022 both Repsol ventures and Shell ventures have invested in SeeO2 Energy. Canada's Utility Giant ATCO has invested in SeeO2 in two different rounds. We are the only startup they have ever invested in.

## COMPANY PROFILE

**Target Markets:**

- Heavy Industry (Cement, Steel, Aluminum, Chemicals, Pulp & Paper...)
- Grid/Power/Utilities
- Natural Resource Extraction (Mining, Forestry, Oil & Gas)

**Leadership:**

[Paul Addo](#)

**Number of full time employee equivalents:**

8 - Calgary, AB

**Acceleration Programs:**

MarS, TechStars Energy, Third Derivative

**Awards and Recognition:**

- Eureka Innovation Award
- MITACS Environmental Enterprise
- NREL Top 30 Cleantech Startups

**Non-dilutive Grant Funding:**

- NRC IRAP
- SR&ED
- SDTC
- ECCIR
- GreenSTEM
- EUREKA (NRC IRAP international)

**Grant Funding Raised (\$CAD):**

\$2,500,000.00

**Investors:**

Repsol Ventures, ATCO, Shell ventures, Third Derivative, Techstars

**Most Recent Equity Capital Raise completed:**

Seed (\$500k-\$2M)

**Dilutive Equity Funding Raised (\$CAD):**

\$1,500,000.00

**Planned Equity Raise:**

Q1 2023, Series A \$15M-\$20M

[Pitch Video](#)

[Website](#)



BOOK A MEETING





# SolarSteam Inc.

Delivering renewable heat to industrial and institutional clients is a gamechanger to reduce their costs and emissions.

SolarSteam, est. 2017 as Alberta corporation, is a hard/climate-tech start-up focused on development and commercialization of a novel enclosed concentrated solar technology delivering renewable heat to industrial and institutional clients in extreme climates. The technology offers plug and play integration into brownfield and greenfield facilities in heat-intensive industry markets such as petrochemical production, bio-refineries, cement and steel production, hydrogen production, pulp & paper manufacturing, district heating & cooling, food processing, and alcohol/beverages production.

Solar Steam's system operates in conjunction with existing boiler systems, using boiler-fed water or heat transfer fluids to provide hot water and steam generation at temperatures up to 350°C. Distinguishing this technology from competitors is its modularity, tailoring to all climates, including northern climates, and capacity to decrease fuel consumption and carbon costs by displacing quantities of carbon dioxide produced by traditional heat generation and enabling companies to meet their 2030 and 2050 targets without investing in stranded assets and amortizing expensive existing OPEX.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

Between 2020 and 2021, the Company completed a \$800k pre-seed round in a combination of Friends and Family and accelerator/VC investment and nondilutive non-repayable funding. This allowed for expansion of the team to 5FT employees and engagement with a Calgary based EPC and fabricators, leading research institutes such as the National Renewable Energy Laboratory (NREL) in the United States and University of Calgary, University of New Brunswick, Lambton Collage and Red Deer Polytechnic in Canada.

The increased bench strength of the team led to the development of a TRL7 field pilot in Ponoka, Alberta and the launch of an aggressive customer discovery campaign producing a \$25M+ pipeline of demonstration projects in Canada, the US and Europe.

[Pitch Video](#)

[Website](#)

[in](#)

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Water
- Agrifood
- Built Environment
- Natural Resource Extraction (Mining, Forestry, Oil & Gas)
- Heavy Industry (Cement, Steel, Aluminum, Chemicals, Pulp & Paper...)

### Leadership:

[Apostol Radev](#)

### Number of full time employee equivalents:

8 - Calgary, AB

### Acceleration Programs:

Foresight Canada, gener8tor, Energia Ventures, Plug & Play, GreenSTEM, CTA Denver

### Awards and Recognition:

- Calgary Mayor's Innovation Challenge Finalist
- InVentures Pitch Competition Finalist

### Non-dilutive Grant Funding:

- GreenSTEM
- Alberta Innovates
- NRC IRAP

### Grant Funding Raised (\$CAD):

\$900,000.00

### Investors:

Gener8tor, NBIF, Innovation Capital KDA

### Most Recent Equity Capital Raise completed:

Pre-seed (Up to \$500k)

### Dilutive Equity Funding Raised (\$CAD):

\$300,000.00

### Planned Equity Raise:

\$2.5M USD



# Summit Nanotech

Clean Tech | Clean Future

Every climate change mitigation scenario relies on significant EV adoption, which requires rapid lithium supply growth given its role as the keystone element in batteries. This is driving an expected 10x in lithium demand between now and 2040. In the absence of innovation, current lithium supply methods will fall well short of matching the growth needed to achieve these critical climate goals.

Summit Nanotech has developed a novel sorbent-based direct lithium extraction (“DLE”) technology, denaLi™ to accelerate the global energy transition. The denaLi™ DLE technology is designed to double yield, reduce GHG emissions, minimize the use of reagents and fresh water, and materially reduce waste compared to traditional lithium production methods. The technology has been validated by the National Research Council of Canada, is currently being piloted in-field in South America, and will be further calibrated to a variety of lithium feedstocks in South America, North America, and Europe.

Today, the company is composed of 52 resource and technology experts, with offices in Calgary, Alberta, and Chile. The Company expects that by 2030, its technology will be used to produce 10% of global lithium demand, generating \$1.2 billion of annual corporate revenue while defining new environmental benchmarks for critical mineral extraction and delivering true value for the communities in which we operate.

## Why our venture should be considered one of Canada’s 50 most investable cleantech companies:

Summit Nanotech has developed industry-changing technology to produce battery grade lithium from brine resources in an economically and environmentally superior way compared to incumbent methods.

The executive team and the Board is deliberately built to execute on this opportunity, leveraging decades of resource extraction, technology scaling, and commercial deployment experience. Their investors are heavily experienced in the cleantech space, with prior investments including Tesla, QuantumScape, and Redwood Materials.

They are currently raising money and expect to be oversubscribed and already have early indications of interest for their next round in 2023, which will fund the Company through to the stage of commercial readiness. The Company is well poised to take advantage of a generational energy transition opportunity that will have a globally relevant environmental benefit.

[Website](#)

in

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Natural Resource Extraction

### Leadership:

[Amanda Hall](#)

**Number of full time employee equivalents:**  
52 - Calgary, AB

### Acceleration Programs:

Foresight Canada, MaRS Women in Cleantech, Creative Destruction Lab, Third Derivative, Clean Tech Open

### Awards and Recognition:

- Foresight 50 (2021)
- The Future 50
- Solar Impulse Efficient Solution Label
- Women in Cleantech Challenge Winner
- NACO Top 30 Most Promising Startups in Canada
- Top 25 Women of Influence
- Ventures Startup Pitch Winner
- Energy New Ventures Competition 2nd Place Energy Venture

### Non-dilutive Grant Funding:

SDTC, NRC, NRCAN, NGen, Alberta Innovates, NRC IRAP, CanExport Innovation

**Grant Funding Raised (\$CAD):**  
\$8,187,521.00

### Investors:

Capricorn, Xora (deep tech arm of Temasek), BHP Ventures, The51, Antares Investments

**Most Recent Equity Capital Raise completed:**  
Series A (\$2M-\$20M)

**Dilutive Equity Funding Raised (\$CAD):**  
\$19,095,510.00

**Projected Revenues for 2022 (\$CAD):**  
\$35,000.00

**Planned Equity Raise:**  
~\$40M USD Series A2 in 2022, 150M+ USD Series B round in 2023



# Swift Charge

Electric Vehicle Charging Anywhere

Swift Charge is developing a smart EV charging technology with proprietary power control software and power conversion hardware that closes the gap between the demand for EV charging and the limit of grid power capacity. Our solution is the only one that allows zero infrastructure upgrades for EV charging applications at any scale and any locations. In this way, we help EV charging station owners minimize the upfront cost, reduce deployment time by 90%, lower lifetime ownership cost by 50%, and removes risks related to future expansion.

Our solution, covering both level 2 (overnight) charging and fast charging, offers benefits for any parking infrastructure owners such as apartments, hotels, universities, public parking lots, and gas stations. By enabling a widespread EV charging network across the map within a much shorter time, Swift Charge will unleash the full potential of EV adoption, effectively offsetting the GHG emissions from the transportation sector.

Our goal is to deploy 100,000 level 2 chargers and 7500 fast chargers by 2030, and generate \$1 billion total revenue. Currently, we are deploying 42 level 2 EV chargers at the University of Alberta and NAIT, and piloting our power conversion technology with FortisAlberta. The projects have generated \$215K total revenue. We are closing our first commercial deal for 4 level 2 chargers with a hotel in BC, which will generate \$12K ARR. We have also secured signed LOIs from FortisBC, EPCOR, EQUUS, and other customers for our fast charger product, which will be launched in Q3 2022.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

Swift Charge was founded by a team of researchers and professionals in the power and renewable energy industries. We are dedicated to revolutionize the EV charging industry. Our advisors include a former utility executive who has connected us with senior management team at large utility companies; and an experienced product development team lead in renewable energy industry who has helped Swift Charge with the CSA certification process. In addition to the mentioned traction, we have promising conversations with multiple large customers such as universities and high end hotels. We are confident that we will deploy over 200 level 2 chargers in the next 12 months, generating \$250K ARR. Once the fast charger product is certified, the existing LOIs for 5 fast chargers will generate over \$550K revenue next year. (We are undergoing a rebranding process. Our website is currently redirected to our operating brand Swift Charge. Swift Charge will exist as the parent entity)

[Website](#) in

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Grid/Power/Utilities
- Transportation & Mobility

### Leadership:

[Zhongyi Quan](#)

### Number of full time employee equivalents:

8 - Edmonton, AB

### Acceleration Programs:

Foresight Canada, 500 Global, Plug and Play

### Non-dilutive Grant Funding:

- NRC IRAP
- NRCan
- Alberta Innovates

### Grant Funding Raised (\$CAD):

\$1,600,000.00

### Projected Revenues for 2022 (\$CAD):

\$85,000.00

### Planned Equity Raise:

Currently raising a \$1M Pre-seed round



# Swirltex Inc.

## A Spin on Filtration

Swirltex's clean technology is able to take the toughest wastewater and turn it into a reusable resource. Their process allows conventional membranes to increase their efficiency with a buoyancy-enhanced water treatment solution.

Their technology reduces energy and freshwater consumption by facilitating water reuse. The key to their system is the distinctive annular flow pattern in which contaminants are channeled away from the membrane surface, allowing clean water to pass through.

The Swirltex technology was recently awarded a full-scale project in collaboration with ARC Resources Ltd. (ARC), to reduce their freshwater consumption and improve their produced water recycling capabilities.

Additionally, Swirltex's technology reduces ARC's GHG emissions by 30% by minimizing the amount of transportation needed for the disposal of wastewater. This system is expected to be operational before the end of 2023. Swirltex continues to tap into new industries like the lithium and mining industry.

The Swirltex solution's ability to handle hazardous and tough waste streams has been revolutionary in the water treatment industry and continues to create change with a focus on sustainability and a goal of net-zero wasted water.



[Website](#)

BOOK A MEETING

### COMPANY PROFILE

#### Target Markets:

- Water

#### Leadership:

Rob Budianto

#### Number of full time employee equivalents:

14 - Calgary, AB

#### Acceleration Programs:

Creative Destruction Labs

#### Awards and Recognition:

- Foresight 50 (2021)
- Creative Destruction Labs - top 3 finalists

#### Non-dilutive Grant Funding:

- Alberta Innovates
- NRC IRAP
- SR&ED
- SDTC
- NRCan
- Superclusters
- ECCC
- Provincial funding bodies

#### Investors:

VADA Capital, Blue Sky Equities, GMP Securities, Mazarine Ventures

#### Most Recent Equity Capital Raise completed:

Seed (\$500k-\$2M)

#### Projected Revenues for 2022 (\$CAD):

\$4,500,000.00

#### Planned Equity Raise:

\$4M Series A in early 2023

## Takachar

We turn trash (crop and forest residues) into cash (higher-value chemicals, biofuels, and fertilizer base) in remote communities.

Crop/forest residues (biomass) are loose, wet, bulky, and expensive to transport/centralize for conversion. Thus, many rural communities are shut out from the nascent bioeconomy, and their only recourse is to set residues on fire. This not only represents a \$120 billion/year of lost economic opportunity, but also creates air/smog pollution, and sometimes exacerbates catastrophic wildfires.

We develop small-scale, low-cost, portable systems that can latch onto the back of tractors/pick-up trucks to deploy to remote, hard-to-access communities to locally upgrade and densify residues on-site, without needing external energy inputs, into customizable higher-value, carbon-based bioproducts such as biofuels, chemicals, or carbon-negative fertilizer blends. Many of these commodities can be sold locally, thereby directly replacing the expensive, imported, synthetic alternatives. As an example, rural farming communities, using our carbon-based fertilizers, can cut back significantly on the reliance on energy-intensive chemical fertilizers, whose availability has been threatened by supply chain disruptions caused by the pandemic as well as the Russian-Ukrainian war.

By developing self-sufficient rural bioeconomies, our work overwhelmingly benefits rural underserved communities by creating local unskilled livelihood and enabling rural communities to access carbon market for the first time. Therefore, our solution not only has the potential to durably remove 2.4 gigatonnes/year of CO<sub>2</sub>e and avoid another 5.0 gigatonnes/year of CO<sub>2</sub>e worldwide, but also uniquely advances climate justice on behalf of underserved communities.

Currently, we operate decentralized pilots with actual end users in conjunction with three First Nations (Lil'wat, Esk'etemc, and Ulkatcho) in the Pacific Northwest. Our fertilizer bioproduct has 7,000 paying customers.

### Why our venture should be considered one of Canada's 50 most investable cleantech companies:

We uniquely combine intimate, lived experience of rural communities with the cutting-edge technical prowess to create a knock-out team. Vidyut Mohan graduated from the Technical University of Delft with a master's thesis focusing on decentralized biomass systems, conducting detailed fieldwork in the rural biomass supply chain. He worked with Simpa Energy, focusing on small-scale rural solar deployment. His expertise is on understanding customer needs and developing service offerings in a user-centric manner. Prior to this company, Vidyut founded Pirool Energy, which turns unused pine needles into a low-cost biofuel. Kevin Kung, Ph.D. led the initial development of the company's core technology as his PhD thesis in Biofuels and Renewable Energy at Massachusetts Institute of Technology (MIT), from which he graduated in 2017. Kevin has 10 years of experience with engineering design and entrepreneurship in rural, resource-constrained communities in Africa and India. Kevin co-founded a previous company that sold over one million low-toxin mosquito coils (SafiCoils). Our scientific advisor who reviews all our field trials, Professor Johannes Lehmann, is the Liberty Hyde Bailey Professor in the School of Integrative Plant, Soil, and Crop Sciences at Cornell University. His interests include soil biogeochemistry and fertilizer management with a focus on carbon sequestration, nutrient recycling from wastes, biochar systems, circular economy, and sustainable agriculture in the tropics. He has 20 years of experience carrying out similar randomized controlled field trials.

## COMPANY PROFILE

### Target Markets:

- Agrifood

### Leadership:

[Kevin Kung](#)

### Number of full time employee equivalents:

19 - Vancouver, BC

### Acceleration Programs:

entrepreneurship@UBC, Breakthrough Energy Fellowship, Cyclotron Road Fellowship

### Awards and Recognition:

- Prince William's inaugural Earthshot Prize
- Elon Musk's XPRIZE Carbon Removal
- Bill Gates's Breakthrough Energy Fellowship

### Non-dilutive Grant Funding:

- Agriculture and Agri-Food Canada
- Province of British Columbia
- Breakthrough Energy
- Royal Foundation
- Elon Musk Foundation
- Schmidt Family Foundation
- World Food Programme
- Groupe OCP
- Tata Trusts

### Grant Funding Raised (\$CAD):

\$11,000,000.00

### Projected Revenues for 2022 (\$CAD):

\$210,000.00

### Planned Equity Raise:

Yes, contact to discuss





# TechBrew Robotics Inc.

## Vision Guided Robots and Automation

Techbrew Robotics has developed patent-pending vision-guided robotic automation that accelerates conventional manufacturing processes. We use state-of-the-art Machine Learning and other Artificial Intelligence technologies to double the mushroom harvest (mass) with the same inputs and farm infrastructure. Our robotic harvesting system will improve a farm's mushroom yield by 50%, optimizing the yield while using the same resources, which reduces energy and labour consumption. Our solution reduces carbon footprint, lowers production costs, improves labour options, and increases food security. Canadian mushroom growers produced 132,589 metric tonnes of mushrooms in 2020. The edible Mushroom Market Value is growing at a CAGR of 9.54% and will reach USD 78.9 billion by the end of 2024. The mushroom industry has an unmet need for robotic automation. Source: AgCan (2022) Government of Canada invests in market expansion opportunities for Canada's mushroom sector. The benefits derived from optimizing the entire process include: reducing the risk of product disease/damage, better separation and quality control, picking at consistent intervals and reducing product waste, and selecting 24/ hours per day to increase food stability. Techbrew is two years ahead of the competition and has the first-mover advantage to capitalize on this market. Our pilot customers are anxious to automate their farms with the capacity to consume up to \$200M worth of robots. We expect an order for up to 50 robots by the end of the 4th quarter of 2022. To meet their needs, we plan to ramp our production capacity to 1000 robots per year as quickly as possible.

### Why our venture should be considered one of Canada's 50 most investable cleantech companies:

**Sustainability: Robotics/Autonomous Systems for Reduction in GHG Emissions (Climate Change)** Agriculture is a life-sustaining sector of BC's (and Canada's) economy, and it continues to be one of the most significant emitters of greenhouse gases (GHG). According to Statistics Canada, in 2020, the agriculture sector was the fifth-largest source of GHG emissions, accounting for 10% of total national emissions, with 69 megatonnes of carbon dioxide equivalent (Mt CO<sub>2</sub> eq) emitted (source). There is a dire need for innovation in agriculture farming methods as the sector continues to depend heavily on fossil fuels. This dependence jeopardizes food security and poses a significant risk to the sector's sustainability and production outputs (source).

**Environmental Benefits:** The primary environmental benefit of our technology is a 50% reduction (Climate Change) TechBrew Robotics understands the importance of clean technology innovation. Our dedicated team has developed automated robotic harvesting processes to reduce the resources required by 50% while still achieving the same outputs. We will see this benefits first in British Columbia, the location of our headquarters, and our pilot testing. The reduction comes from optimizing the entire process – from better separation, picking at consistent intervals, picking 24 hours per day, and reducing disease. We can optimize the yield using the same resources which reduces energy consumption and water waste.

[Pitch Video](#) [Website](#) [Twitter](#) [LinkedIn](#) [Facebook](#) [Instagram](#)

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Agrifood

### Leadership:

[Mike Boudreau](#)

**Number of full time employee equivalents:**  
45 – Salmon Arm, BC

### Acceleration Programs:

Foresight Canada , BC Cultivator, Accelerate Okanagan

### Awards and Recognition:

- BC Tech "Excellence in Industry Innovation" Impact Award Finalist (2022)
- OKGN Angel Summit (2021)
- BC AgriTech Innovation Challenge (2019)

### Non-dilutive Grant Funding:

- CAAIN
- SR&ED
- NRC IRAP
- Innovate BC
- B.C. Agritech Grant
- AgrCan Grant

### Grant Funding Raised (\$CAD):

\$4,000,000.00

### Investors:

Emmertech Fund

### Most Recent Equity Capital Raise completed:

Series A (\$2M-\$20M)

### Dilutive Equity Funding Raised (\$CAD):

\$4,500,000.00

### Projected Revenues for 2022 (\$CAD):

\$2,000,000.00

### Planned Equity Raise:

Yes



# Terramera, Inc.

## Transforming how food is grown and the economics of agriculture

Terramera is a BC based AgTech company and emerging global leader focusing on leveraging advanced technologies to make agriculture more productive, sustainable, and regenerative. The company fuses complex science, mobile applications, and automation to transform how food is grown & the economics of agriculture. The company is focused on two key areas – providing environmentally friendly superior crop inputs and launching a soil health platform. Several Terramera plant-based agricultural products including the broad spectrum biopesticide, Rango have been approved by the EPA and are sold to growers and regional distributors in the US. Revenue from agricultural products was C\$4.3M in 2021 with a higher revenue projection for 2022.

The company is also working on the rapid commercialization of our soil health improvement platform and novel sensor to create a new global standard for soil health testing. With this soil health measurement technology, consisting of a novel sensor and associated software app for agronomists and farmers, Terramera is aiming to reduce soil sampling costs by at least one third representing substantial savings for growers.

In addition to lowering costs, their technology will deliver results in minutes, compared to weeks/months, reduce the error margins associated with current analysis, and decrease associated costs to farmers from more accurate prescriptions to lower fertilizer use. The rapid scaling of their application and expansion to commercial scale across Canada and the US will lead to high revenue potential with a projected \$235M by 2026.

### Why our venture should be considered one of Canada’s 50 most investable cleantech companies:

Conventional farming feeds the world but is killing the soils and planet. More than 70% of the world’s topsoil is gone and 250 Billion Tonnes of CO2e have been lost from soils into the atmosphere.

Terramera’s innovative soil health platform consisting of soil health testing and soil health improvement tools will mitigate climate change by sequestering 0.4-2T per acre per year of carbon from the air and storing it in the soil. In addition, farmer profit will increase up to six-fold through reduction of soil testing and fertilizer costs, and farm resilience to drought and flood will be improved.

Terramera’s novel sensing technology increases read sensitivity at a million times higher resolution than conventional testing techniques and the MVP version was launched in September of 2022. Combined revenue streams of \$3-5/acre for soil health testing and \$4/acre for soil health improvement solutions project a total addressable market potential in Canada and the US of \$7B. Terramera has the technology and the expertise to deliver the solution to market. Terramera is a global leader in computational chemistry, AI, machine learning, robotics, and automation, and holds more than 250 patents in its global IP portfolio. Headquartered in Vancouver, Terramera has integrated operations in Canada, the US, and India, and has entered into partnerships with several organizations to provide testing and deployment of its soil testing platform across Western Canada and the US.

[Website](#)

[BOOK A MEETING](#)

## COMPANY PROFILE

### Target Markets:

- Agrifood

### Leadership:

[Karn Manhas](#)

### Number of full time employee equivalents:

131 - Vancouver, BC

### Acceleration Programs:

Foresight Canada

### Awards and Recognition:

- BC Cleantech Awards Industry Icon
- TIA Excellence in Technology Innovation Award (2020)
- EDC Export Star (2021)

### Non-dilutive Grant Funding:

- SDTC
- Digital Technology Supercluster
- BC-ICE
- NRC IRAP
- AAFC

### Grant Funding Raised (\$CAD):

\$18,400,000.00

### Investors:

S2G Ventures, Ospraie Ag Science, IKEA/Ingka GreenTech, Arctern Ventures, Bold Capital Partners

### Most Recent Equity Capital Raise completed:

Series B+ (\$20M+)

### Dilutive Equity Funding Raised (\$CAD):

\$100,000,000.00

### Projected Revenues for 2022 (\$CAD):

\$6,000,000.00

### Planned Equity Raise:

Currently seeking investment



# TheoryMesh

Building traceable and transparent food supply chains for sustainability and food safety

TheoryMesh provides a software platform which connects the agri-food supply chain from farm to consumer package, providing traceability and transparency for better food safety and sustainability. Using blockchain and machine learning, TheoryMesh gives customers and partners a single solution to manage the data across their value chain creating opportunities for cost reduction, process optimization and clear measurement of Scope 1, 2, and 3 emissions for their business. With the connection of the full supply chain, farmers, food companies, and consumers are presented with information that allows them to make more conscious decisions to positively impact the environment.

## Why our venture should be considered one of Canada's 50 most investable cleantech companies:

The food system is estimated to produce 20% of global GHG emissions. With the TheoryMesh platform we connect data from the farm to the consumer which provides the transparency needed for better informed and more environmentally friendly decisions for farmers, food companies and consumers. The transparency created from our single system for managing data across the food system is the best tool to engage and inform stakeholders on the impact of choices on Scope 1, 2, and 3 emissions. We can trace grain and livestock from first inputs through processing, capturing the full scale of food production and helping customers to identify where they can adjust practice, sourcing strategy or consumer messaging to improve their execution of an ESG strategy. Our team works with all of our customers to map their specific ESG goals for their supply chain and allows for that to be optimized through machine learning in the platform. All of the sustainability and traceability information can be made available to consumer through on package QR codes which share the farm and processing practices which lead to better ESG outcomes.

## COMPANY PROFILE

### Target Markets:

- Agrifood

### Leadership:

[Chris Bunio](#)

### Number of full time employee equivalents:

6 - Winnipeg, MB

### Acceleration Programs:

Foresight Canada, North Forge, Foresight AgriNext, Creative Destruction Lab

### Awards and Recognition:

- Dentons AgTech Pitch Competition

### Non-dilutive Grant Funding:

- NRC IRAP

### Grant Funding Raised (\$CAD):

\$235,000.00

### Projected Revenues for 2022 (\$CAD):

\$100,000.00

### Planned Equity Raise:

Raising \$2M seed round by the end of 2022

[Pitch Video](#)

[Website](#)



BOOK A MEETING



# Verdi

The climate adaptation platform for agriculture

Verdi is building the platform to help the global agriculture industry to adapt to climate change. They have developed the first scalable smart systems to tackle agriculture’s most critical challenge: water scarcity. Water is running out for agriculture, an industry accounting for 70% of global water usage, and that’s largely due to outdated and inefficient irrigation infrastructure.

Their smart devices augment legacy irrigation systems with plant-level healthcare and automation capabilities, allowing farmers to radically improve crop productivity and reduce water risk.

Today, Verdi works with the world’s largest food and beverage brands at the Fortune 1000-scale to bring climate-resilient operations to their fields. They are on track to save over 7 million liters of water for their customers this year and their goal by 2027 is to help farmers save 20 billion liters of water every year.

### Why our venture should be considered one of Canada’s 50 most investable cleantech companies:

Verdi’s value is backed by traction. In Q1, they grew revenue 4x to \$135K ARR CAD, and are in negotiations to double that to \$270K ARR CAD for Q3. To date, they have also seen zero churn, with 70% of our growth coming from expanding customers. This season they have managing over 600 acres of farms, and are on track to save farmers over 7 million liters of water this year.

Their customers include the world’s largest food brands at the Fortune 1000-scale, managing crops ranging from wine, to berries, to tree fruits and nuts. With these brands, they are also beginning to expand internationally into South America, Australia, Africa, and Europe. This year, they have also grown their pipeline from \$1M to \$64M in available ARR.

Verdi’s differentiation is validated by customers. Unlike regular garden irrigation, which is very simple, the challenge of precision ag is that it needs 100s of smart devices to work together, creating problematic network effects which they have solved through their proprietary software and patent-pending systems. They have also completed 2 years of field trials, giving them a natural moat, and a growing dataset of over 1 million data points that they are using to create new products.

## COMPANY PROFILE

### Target Markets:

- Global Agriculture Producers (Fruits, Nuts, Vegetables)

### Leadership:

[Arthur Chen](#)

**Number of full time employee equivalents:**  
8 - Vancouver, BC

### Acceleration Programs:

Alchemist Accelerator, THRIVE Accelerator, e@UBC HATCH Accelerator (current)

### Awards and Recognition:

- Foresight 50 (2021)
- THRIVE Sustainability Award
- Techcrunch Disrupt Startup Battlefield
- CrossoverAI (2020)

### Non-dilutive Grant Funding:

- BC Agritech Innovation Grant
- SDTC Seed Fund
- BC Fast Pilot

**Grant Funding Raised (\$CAD):**  
\$480,000.00

### Investors:

THRIVE/SVG Ventures, Startup Haven Fund, Rarebreed Ventures, Echo River Capital, Alchemist Accelerator, Tom Urban (Agribusiness Advisors), Kevin Merritt

**Most Recent Equity Capital Raise completed:**  
Seed (\$500K - \$2M)

**Dilutive Equity Funding Raised (\$CAD):**  
\$1,100,000.00

**Projected Revenues for 2022 (\$CAD):**  
\$340,000.00

[Pitch Video](#)

[Website](#)



BOOK A MEETING



# Viridis Research

## Water free of microplastics

Microplastics are everywhere. One of the main contributors to microplastics are synthetic microfiber release during the washing process. The European Union, California, and other jurisdictions around the world have begun introducing legislation that requires washing machine manufacturer to incorporate a microfiber filtration system

Tier 1 and OEM to implement microfiber capturing technologies into the new washing machines to be in compliance with the new regulation.

Our Veox system can be retrofitted to washing machines or incorporated into them, helping washing machine manufacturers to be in compliance

Viridis' technology is unique because it does not need any cartridges, which generate even more plastic pollution, degrades microfiber to non-toxic by-products, and is a smart device, so you don't have to think about it, you can just use it.

### Why our venture should be considered one of Canada's 50 most investable cleantech companies:

We are the best solution in the market for microplastic problem.

[Website](#)  

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Water

### Leadership:

[Macarena Cataldo-Hernandez](#)

### Number of full time employee equivalents:

4 - Vancouver, BC

### Acceleration Programs:

Foresight Canada, E@UBC, Sheboot

### Awards and Recognition:

- Spring Impact challenge
- Tie Vancouver
- Cleantech 50 to watch (2022)
- Impact Company Coastal Capital (2022)

### Non-dilutive Grant Funding:

- NRC IRAP
- SDTC
- Mltacs
- BC

### Grant Funding Raised (\$CAD):

\$450,000.00

### Investors:

Spring investor challenge

### Most Recent Equity Capital Raise completed:

Pre-seed (Up to \$500k)

### Dilutive Equity Funding Raised (\$CAD):

\$400,000.00

### Planned Equity Raise:

\$2M in May 2023





# ZILA Works

## Industrial Bioplastics for the Low Carbon Economy

Epoxy resins are everywhere. They are used in plastic composites, like the blades of a wind turbine or the body of the car. They are also used as glues, foams, and coatings such as sealing a concrete floor. Unfortunately, the 4 million tons of epoxy we use globally each year have a heavy carbon footprint.

ZILA Works is developing a bio-epoxy resin to help product manufacturers lower their carbon footprint. ZILA uses plants to create a drop-in epoxy replacement for a number of different applications. They have identified clear steps to a 60% reduction in carbon footprint compared to petroleum-based epoxies (the nearest competitor offers only a 14% reduction).

ZILA works intimately with product manufacturers to formulate the epoxy resin system so that performance is on par (or better), and no retooling is required to adopt. They have traction in the marketplace: the world's largest snowboard manufacturer, and the largest wind turbine manufacturer, want to use their technology in products to reduce the carbon footprint. They are currently scaling up their technology with a toll manufacturer and delivering resin for their first paid pilot in outdoor in November.

### Why our venture should be considered one of Canada's 50 most investable cleantech companies:

ZILA Works utilizes hemp seed oil for its primary feedstock, and is collaborating with industrial hemp growers and processors in Alberta where hemp benefits from two decades of maturity.

ZILA's patented technology is not limited to hemp seed oil; they can utilize any vegetable oil providing opportunities for sustainable crop rotation with producers. ZILA's patent portfolio includes four issued and three pending patents. ZILA Works recognizes the demand for its technology is in the US, Asia, and Europe where there is heavy manufacturing.

ZILA has channels to the US market place through government procurement offices as a certified Minority-Owned Business Enterprise. Instead of exporting out of Canada raw hemp seed oil, ZILA Works is working to pilot the higher value added bio-epoxy resin production in Canada. This will allow ZILA Works to leverage high quality talent pools of chemists and chemical engineers from the oil & gas industry. This will compliment the existing strong team of industry professionals.

[Website](#)

BOOK A MEETING

## COMPANY PROFILE

### Target Markets:

- Grid/Power/Utilities
- Transportation & Mobility
- Built Environment
- Heavy Industry

### Leadership:

[Jason Puracal](#)

### Number of full time employee equivalents:

7 - Calgary, AB

### Acceleration Programs:

Foresight Canada, Cascadia Cleantech, CHIC/Fuse42, The Heritage Group

### Awards and Recognition:

- Foresight 50 (2021)
- Foresight Canada SDG Connect Challenge - Vestas Turbine Challenge (2021)
- ISC3 Innovation Challenge (Germany) (2020)
- Energy Globe Austrian Trade Commission (2019)

### Non-dilutive Grant Funding:

- EPA
- Cleantech Alliance/Washington State University
- North Dakota State University
- Mitacs Internship
- Mitacs Postdoc Fellowships, U of A

### Grant Funding Raised (\$CAD):

\$1,150,000.00

### Investors:

Joby Titus, The Heritage Group, Tall Grass Ventures

### Most Recent Equity Capital

#### Raise completed:

Seed (\$500k-\$2M)

### Dilutive Equity Funding

#### Raised (\$CAD):

\$1,560,000.00

### Projected Revenues for

#### 2022 (\$CAD):

\$3,000.00

### Planned Equity Raise:

Seed Extension of \$3M USD, 2022

# Cleantech Innovation Starts Here!



**F O R E S I G H T**  
C A N A D A

Foresight is enabling Canada to become the first G7 country to reach net zero. To accelerate the transition, we need to rapidly launch, commercialize, and scale climate solutions. With the support of our Helix 5 partners – innovators, industry, investors, government, and academia – Foresight is relentlessly driving cleantech innovation in Canada.

## OUR IMPACT

**890+**  
ventures supported

**7,150**  
jobs created

**\$1.31B**  
in capital support

**\$390M**  
in revenue generated

## ACCELERATION PROGRAMS

Through mentorship, training, and networking events, Foresight Canada helps cleantech ventures get to market faster. Our comprehensive Acceleration roadmap helps entrepreneurs commercialize and scale their cleantech ventures.

Whatever the stage of your cleantech venture, we can accelerate your growth and impact.

## INNOVATION CHALLENGES

Our Innovation Challenges connect companies or governments facing sustainability hurdles with market-ready cleantech innovations.

From waste heat recovery in the oil & gas industry to soil nutrient recovery, our Challenges provide solutions to real-world environmental problems – while reducing risks for buyers and identifying customers for ventures.

## SECTOR-SPECIFIC INITIATIVES

Our sector-based approach harnesses energy and innovation in certain cleantech areas to support the development of high impact solutions. We have created innovation hubs – agriNEXT, bioNEXT, builtNEXT, carbonNEXT, energyNEXT, and waterNEXT – to accelerate the commercialization and adoption of climate solutions.

## INVESTOR PROGRAMS

Canada is a growing launchpad for transformative cleantech ventures, but they generally raise about half the capital as US-based competitors. With the biggest pipeline of early stage cleantech ventures in Canada, Foresight works to level the playing field by growing Canada's cleantech angel and venture capital community and preparing ventures to be investor ready from pre-Seed onward.

Join our Community of Innovators to stay connected with cleantech news, opportunities, and events.

**FORESIGHTCAC.COM**