

# Annual Report

## Highlights and achievements

Transforming innovations into commercial success  
2020–21





# Overview

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## A message from our CEO

# The road to Canada's Food & Agri-Tech Engine

For more than 17 years, Bioenterprise has been a leader in supporting and advancing commercialization and innovation support in Canada's agriculture industry. Since our inception, we've been dedicated to promoting the creation, growth and expansion of agriculture, agri-food and agri-tech start-ups, entrepreneurs and growth-oriented businesses.

As Canada's number one food and agriculture accelerator, we're proud of what this organization has been able to achieve.

And we're excited about the future potential of this sector. The 2017 Barton Report identified the agri-food sector as a pillar of Canada's economic growth with the opportunity to become a trusted global leader in food exports. The federal Agri-Food Economic Strategy Roundtable also pointed to the immense growth potential of the sector in its 2018 report and underlined the need for a coordinated approach.

Innovation is key to helping Canada realize that potential, but according to Bloomberg's Innovation Index, Canada is ranked 21st in the world on its ability to move innovation into the marketplace. We know one of the big reasons for that is the piece-meal make-up of Canada's agriculture and agri-food innovation ecosystem.

Historically, that ecosystem been highly fragmented and vastly under-funded. Information, resources and expertise are difficult to find, challenging to coordinate and often siloed by region, province or sector. For Canada to punch above its weight globally, we need to solve the problem of the fragmented ecosystem - and it's long been our vision to create an environment that is more collaborative, more cooperative, and more national.

In 2020, that vision became a reality with the creation of **Canada's Food & Agri-Tech Engine**, a new national network that participates in and leads food and agri-tech innovation initiatives across the country. With the Engine, we're enabling like-minded organizations to collaborate instead of competing with each other.

By bringing people and organizations together through the Engine, we can harness the innovative spirit and growth potential of our agriculture and agri-food sector for the benefit of all Canadians as we embark on post-pandemic recovery and beyond.

The response to the launch of the Engine has been tremendous, underscoring our belief in the need for this national approach to agricultural innovation.

We appreciate the support and collaboration of everyone who has reached out to us, met with us, already joined the Engine as a member or partner, and continues to help us create a dynamic, impactful and globally competitive ecosystem that will put Canadian innovation on the world map.

Together we are stronger, and we are committed to the continued expansion of the Engine so we can help companies across Canada connect, innovate and grow to meet their potential.



A handwritten signature in dark ink that reads "Dave Smardon".

**Dave Smardon,**  
CEO & President, Bioenterprise

**4000+**  
global connections

**\$1 = \$200**  
invested      returned

**2000+**  
technologies launched

**\$268M**  
in revenue generated



“

*By bringing people and organizations together through the Engine, we can harness the innovative spirit and growth potential of our agriculture and agri-food sector for the benefit of all Canadians as we embark on post-pandemic recovery and beyond.*

# The Engine at a glance

On-the-ground innovation support from coast to coast



7

Locations in  
six provinces



7

Regional  
partners



165+

NEW  
members/partners this year



12

Innovation  
advisors



5

Innovation funding  
programs managed

## Our core services – The Engine

# Engine 101



### Connect.

We are building a national community of industry, academia, entrepreneurs and innovation organizations to strengthen our industry.



### Innovate.

We accelerate innovation through our national and global network with deep sector knowledge and business mentorship.



### Grow.

We help businesses grow with mentorship, funding, and key programs and resources to scale their technologies.

## Bioenterprise is Canada's Food & Agri-Tech Engine

We are a national network of entrepreneurs, accelerators, service partners and like-minded organizations who are committed to driving innovation in Canada's agri-tech and agri-food industry.

We've brought together key players in the national agri-food and agri-tech ecosystem to support entrepreneurs in their journey from market entry to global expansion. That includes connecting them with industry leaders, researchers, government stakeholders and critical service providers to help ensure their success.

Our highly qualified team has extensive business experience and industry-specific expertise in agriculture, agri-food and agri-technology agriculture and business to help entrepreneurs, start-ups and growth-oriented companies transform their businesses and scale up nationally and globally.



## Our core services – our team

# Meet the team

Our highly qualified team has extensive business experience and industry-specific expertise in agriculture, agri-food and agri-technology to help entrepreneurs, start-ups and growth-oriented companies transform their businesses and scale up nationally and globally.

## Innovation Advisors

Our team of innovation advisors is located in different parts of the country and has a wide range of expertise in key areas.



**Michael McGee**

Agri-tech, venture capital  
and governance



**Colin Farnum**

Food technology and  
corporate affairs



**Denise Dewar**

Crop agriculture, value  
chain and regulatory affairs



**Doug Knox**

Agri-food equipment  
and technology



**Paul Richards**

Venture capital  
investment strategies



**Neil Currie**

Primary agriculture,  
value chain and governance



**Dr. Murray McLaughlin**

Bioeconomy  
(agriculture and forestry)



**Richard Cloutier**

Investment and  
development strategies



**Johanne Sévigny**

Start-ups, investment and  
business strategies



**Mike Manion**

Agri-tech and  
agri-business



**Gabe Gusmini**

Agri-tech innovation,  
food crops R&D,  
commercialization



**Terry Clark**

Animal Health  
Technology



## Science and Innovation Advisory Committee

We tap into the collective knowledge of these industry leaders, stakeholders and researchers to stay on top of innovation needs and trends.

Their expertise is invaluable when we are evaluating the science of new opportunities, seeking new partnerships, making funding decisions, or developing new services and programs for the Engine. They also play a key role in the Engine's networking activities.



**Dr. Alison Duncan**  
University of Guelph



**Dr. Rickey Yada**  
University of  
British Columbia



**Dr. Lord Abbey**  
Dalhousie University



**Dr. Nuwan Sella Kapu**  
University of  
British Columbia



**Dr. Tim Sharbel**  
University of Saskatchewan



**Dr. Mike Lohuis**  
Semex



**Dr. Colin Yates**  
Fanshawe College



**Dr. Mike Dixon**  
University of Guelph



**Dr. Lenore Newman**  
University of the  
Fraser Valley



**Dr. Tarlok Sahota**  
Lakehead University



**Dr. Dominique Bureau**  
University of Guelph



**Dr. Al Mussel**  
Agri-Food  
Economic Systems



**Dr. Yuri Montanholi**  
Universidad de la  
Republica Uruguay



**Dr. Franco Berruti**  
Western University



**Dr. Marney Isaac**  
University of Toronto



**Dr. Jim Brandle**  
Canopy Growth  
Corporation

## Our core services – membership

# Perks of membership

We've carefully pulled together our national network of subject matter experts, business advisors and service providers so that the Engine can help members address all of the barriers commonly faced by businesses who are scaling up or expanding. That includes mentorship, coaching, funding programs and investment leads, connections to possible partners and service providers, and more.



Freshspoke Local Delivery

## Access

For most start-ups and scale-ups, one of the biggest challenges is not knowing where to go or who to ask for support, information or resources. That's where the Engine provides enormous benefit: it offers access. That includes funding opportunities, government programs, agronomists, farmers, researchers and business advisors, but also assistance meeting regulatory requirements, or connecting with potential corporate partners.

“

*We wanted to talk to experts in agricultural applications of new technologies; they were very obviously the best people to call.*

**Darren Anderson**

*Founder and CEO, Vive Crop Protection*

## Funding strategy guidance

Members get access to our funding programs - and our innovation advisors will help them identify and navigate the best funding programs for their business.

“

*The Bioenterprise funding let us hire more warehouse staff so we could expand our operating hours. It also let us put in bigger freezers and fridges and more racking in our warehouse, and it supported a radio campaign in our area to promote local food through the holiday season.*

**Marcia Woods**

*Founder and CEO, Freshspoke*



Henry's Tempeh Factory

## Strategic partner identification

Members get connected to the service providers, research and development partners, stakeholders, investors and resources they need to grow their business.

“

*The support has been invaluable in getting connected with local investors and technical partners in Nova Scotia.*

**Santosh Yadav**

Founder, CoteX

## Mentorship and coaching

The Bioenterprise team is a sounding board for new ideas and opportunities. Have a question or in need of some advice? Someone from the Engine can help.

“

*Bioenterprise matched us with experts in the industry to help us frame the market, refine the recipe and figure out aspects of manufacturing, shelf life and packaging design that have been essential in making our new product happen.*

**Jason Jurchuk**

President, Henry's Tempeh

## Investment preparation

Access to capital is critical for growth but can often represent a significant hurdle, especially for start-up companies. We can help members get ready for an investment or product pitch that can set them up for continued growth or expansion.

“

*In the market for natural products you need three things: credibility, network and funding. Bioenterprise gave us all three. The Seed Funding couldn't have been better timed.*

**Faraz Nomani**

Co-Founder of Szio+

## Reality check

Does an innovation or technology have potential? Is there a market? Is a business ready for growth? A reality check session with a panel of Engine industry experts will help members answer those questions and more so they know what they need to do to move their business forward.

“

*You absolutely need that support;  
it makes such an incredible difference.”*

**Bethany Deshpande**

*Founder, SomaDetect, who received Bioenterprise support in reviewing investment pitch decks, hosting rehearsal sessions and offering feedback on the company's valuation and financials.*

## Financial evaluation

Every business is different, and we can help guide members with the development of a customized business plan.

“

*Bioenterprise helped us produce our first real business plan and establish contacts with eventual strategic partners.*

**Silvia Todorova**

*CEO, Anatis Bioprotection*





## Our core services – partners

# Becoming an Engine Partner

Partnerships are paramount in the innovation ecosystem, and we are fortunate to have a great network of partners and sponsors across Canada who support the work of Canada's Food & Agri-Tech Engine, encourage collaborative approaches, and make their services available to our members.

## National Partners

National companies committed to food and agri-tech markets

## Regional Partners

Key industry players that significantly impact their region's food and agri-tech sector

## Collaborative Partners

Accelerators, economic development agencies, incubators, innovation stakeholders

## Knowledge & Development Partners

Academic or research institutions like colleges, universities and applied research facilities; agricultural producer organizations

## Service Partners

Companies interested in offering business services such as legal, regulatory, marketing, executive consulting and more to our food and agri-tech network

## Our National Partners



## Regional program delivery

# A national approach with regional impact and delivery

Canada's Food & Agri-Tech Engine is a national innovation network that extends from coast to coast, and we are continually adding new members and striking new partnerships to meet evolving needs and emerging opportunities.

FCC is a cornerstone partner in supporting an expansion of Bioenterprise's national accelerator services with a particular focus on mentorship, networking, and training opportunities.

With the support of FCC in particular, Bioenterprise has been able to establish or is still in the process of developing regional agri-tech hubs across the country - Atlantic Canada, Quebec, the Prairies and British Columbia - that include staff, accelerator services and/or commercialization support. Partnerships to support and strengthen existing ecosystems are the foundation of this expansion.



## Atlantic Canada

**Regional office:** Halifax, Nova Scotia

## Quebec

**Regional office:** Repentigny, Quebec

## Ontario

**Regional office:** Guelph, Ontario (Corporate Headquarters)

## Northern Ontario

**Regional office:** Thunder Bay, Ontario (Northern Ontario)

## The Prairies

**Regional offices:** Winnipeg, Manitoba; Calgary, Alberta

## British Columbia

**Regional office:** Kelowna, British Columbia

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*Entrepreneurs across Canada that are innovating in agriculture need access to support and we see Bioenterprise as a good strategic partner to help facilitate that access across the country.*

**Rebecca Clarke**

*FCC Vice President and Treasurer*





# Atlantic Canada

## Regional office

Halifax, Nova Scotia

## Strategic Regional Partners

**Innovacorp** is an early-stage venture capital organization that finds, funds and fosters innovative Nova Scotia start-ups, with a particular focus on information technology, cleantech, life sciences and ocean technology.

**Nova Scotia Innovation Hub** focuses on the province's bioeconomy and helps clients commercialize their businesses by supporting scale-up activities, as well as identifying and addressing research and regulatory gaps in the sector.

## Collaborative Partners

**BioNB** supports the development of New Brunswick's bioeconomy and helps companies grow and commercialize their bioscience ideas.

The **Verschuren Centre Inc.** was established to support a transition to a green and circular economy through the commercialization of innovative clean technologies.

## Knowledge & Development Partner

**Springboard Atlantic** is a network of 19 post-secondary institutions in Atlantic Canada that supports the commercialization of research and strengthens the competitiveness of Canada's industries.

## Program delivery

### GreenShoots

Innovacorp, Nova Scotia Innovation Hub and Bioenterprise came together to develop a suite of commercialization services for Nova Scotia start-ups and scale-ups, which includes creating the GreenShoots program.

GreenShoots provides support for early-stage Nova Scotia companies in the agri-tech and bioeconomy sectors. Participating companies receive up to \$40,000 in funding and business guidance from a network of mentors and experts to help support their innovations through scale-up and commercialization processes. Since the program's launch in August 2020, 17 companies have received GreenShoots support.



## Success story

### CoteX Corp

*The support from InnovaCorp has been invaluable ... in getting connected with local investors and technical partners in Nova Scotia.*

CoteX Technologies of Sydney, Nova Scotia, has developed a low-cost solution to reduce fertilizer loss: a controlled-release biodegradable coating for seeds and fertilizers that can produce a high-quality, polymer-coated product at 30 to 70% less cost than competing liquid coating processes.

It can be used on many different crops, but the most significant potential lies with large commodity crops like corn.

"CoteX is a solution to reduce fertilizer loss and the pollution that causes. More than 50% of all nitrogen that is applied ends up in rivers, lakes and oceans, causing algae blooms and contributing to greenhouse gas emissions - it's one of agriculture's biggest problems," says CoteX founder Santosh Yadav.

In his search for a more permanent home for his business, he connected with InnovaCorp, who helped him establish in Nova Scotia. CoteX is now housed at the Verschuren Centre, where Yadav has continued with his R&D work.

The support from InnovaCorp has been invaluable, he notes, in getting connected with local investors and technical partners in Nova Scotia, and he's excited about being part of the new GreenShoots cohort.

"The GreenShoots grant will let us set up our first lab-scale plant at Verschuren Centre, which is the base for our R&D, as well as cover costs for patent applications," he says.

The full CoteX success story is available at [www.bioenterprise.ca](http://www.bioenterprise.ca).

# Quebec

## Regional office

Repentigny, Quebec

## Strategic Regional Partner

**Zone AgTech**, located near Montreal, is the first Canadian innovation hub dedicated to agri-tech and plant-based bioproducts innovation and an incubator for know-how, entrepreneurship and innovation.

## Knowledge & Development Partner

**INO** is the largest centre of expertise in optics and photonics in Canada, a leading global technology research centre, and a developer of emerging technology solutions relevant to the agri-food industry.

## Program delivery

### AgTech Acceleration Program

Powered by Zone AgTech, the AgTech Acceleration Program supports innovative, sustainable Quebec companies in the agri-food and agri-tech space who are poised for scale-up and growth. The first cohort of the program, launched in 2021, had six participants.



## Success story

### Anatis Bioprotection

*Bioenterprise helped us produce our first real business plan and establish contacts with eventual strategic partners.*

Anatis Bioprotection is a leader in biological pest control for the North American horticulture sector and can trace its successes to development support from Bioenterprise. The company produces, sells and distributes more than 30 biological products, including bioinsecticides, beneficial insects, mites, and nematodes.

According to founder and CEO Silvia Todorova, their particular expertise is in microbiological fungi. In Canada and the United States, they've already registered and started commercializing their first microbiological insecticide products, which are based on *Beauveria bassiana*, a naturally occurring soil fungus that acts as a parasite on horticulture pests like aphids, thrips and whitefly.

About 10 years ago, Todorova needed help to develop a business plan for her young start-up and made a connection with Bioenterprise.

"That was the beginning for us. Bioenterprise helped us produce our first real business plan and establish contacts with eventual strategic partners," she says.

Bioenterprise also helped Anatis develop a marketing plan for the United States and supported them with market forecasting data in those early days. The two organizations re-connected recently after Anatis began working with FCC, a Bioenterprise partner, on financing to expand their production facilities.

"FCC talked to us about Bioenterprise, and we've just become a member of the Engine; they've been great at helping us with advice," says Todorova. "We are growing fast, and we never stop."

The full Anatis success story is available at [www.bioenterprise.ca](http://www.bioenterprise.ca).

# Ontario

## Regional office

Guelph, Ontario

Corporate Headquarters

## Collaborative Partners

**Cleantech Commons** is a research park currently under construction adjacent to Trent's main campus in Peterborough. With a focus on clean, green, low-carbon, and sustainable technologies, it is a partnership between Trent University and the city of Peterborough.

**Innovation York** is the innovation and entrepreneurship support centre at York University.

**MaRS** is North America's largest urban innovation hub focusing on cleantech, health, fintech and enterprise software.

**Vineland Research & Innovation Centre** is Canada's leader in horticultural research and innovation.

## Industry Partner

**Grain Farmers of Ontario** is the province's largest commodity organization, representing Ontario's 28,000 barley, corn, oat, soybean, and wheat farmers.

## Knowledge & Development Partners

**Conestoga College** in Waterloo Region is one of Canada's top research colleges and a provincial leader in apprenticeship training.

**Fanshawe College** in London is one of Ontario's largest colleges. The Centre for Research and Innovation is the institution's applied research arm, working with companies of all sizes to develop or improve products and services, with a particular focus on food innovation.

**Loyalist College** in Belleville has extensive experiential, industry cluster-based education, training and applied research programs.

**Niagara College** is a leader in food, beverage and agri-environmental research and innovation.

**University of Guelph** is known as Canada's Food University and a national and global leader in agricultural research and innovation.

## Program delivery

### SmartGrowth

The SmartGrowth program gives small and medium enterprises in southern Ontario's food and agri-technology sectors access to acceleration financing to support scale-up and expansion projects. Participants receive matching, non-repayable funding as well as coaching and mentorship support services.

Since its launch in 2020, SmartGrowth has supported 17 companies across a diversity of sectors, from food processing and crop protection to smart sensors and container farming. The program is funded by the Government of Canada through the Federal Economic Development Agency for Southern Ontario.





## Success story

### AgriBrink

*Kraayenbrink freely admits he had plenty to learn when he established Agribrink, so he sought advice from experts, including Bioenterprise, where analysts served as a valuable sounding board.*

Every time farmers drive equipment over their fields, they're putting pressure on the soil. And that's a major issue, both for agriculture and for the environment: the more compact soil is, the more it erodes and blows away.

That's one of the reasons why Agribrink founder Jake Kraayenbrink, a southern Ontario hog producer and cash cropper, developed a central tire inflation/deflation system (CTIS) that lets farmers quickly inflate or deflate their tires as they move between roads and fields. This reduces impact on the soil.

Kraayenbrink freely admits he had plenty to learn when he established Agribrink, so he sought advice from experts, including Bioenterprise, where analysts served as a valuable sounding board.

They identified the need for ISO certification and helped Kraayenbrink achieve it. They also connected him to strategic partners, including specialists to patent his award-winning technology, and most recently, he was a seed funding recipient.

As a result, Agribrink is expanding. Over the past year, they've hired a full-time business manager and extended their dealer network to 28 locations across Ontario.

"We're really thankful," says Kraayenbrink. "I think they're a tremendous asset."

The full Agribrink success story is available at [www.bioenterprise.ca](http://www.bioenterprise.ca).

# Northern Ontario

## Regional office

Thunder Bay, Ontario

## Pilot agri-tech hub project

In early 2021, Bioenterprise launched a pan-Northern Ontario pilot agri-tech hub project that will focus on connecting start-ups and early-stage businesses with services and targeted resources across Ontario and Canada. The two-year project is funded by FedNor's Regional Growth Through Innovation Fund, which supports business growth in northern Ontario.

Bioenterprise hired a Northern Ontario regional manager and a business development coordinator to execute the project, both based at Ingenuity, Lakehead University's business incubator in Thunder Bay. A northeastern Ontario relationship manager is located in Sudbury.

The Bioenterprise Northern Ontario team is supported by an advisory committee of stakeholders from across the region. They play a key role in building connections between farmers, agri-businesses, and investors and in identifying potential pilot innovation project opportunities across the region.

## Collaborative Partners

**CENGN, Canada's Centre of Excellence in Next Generation Networks**, drives technology innovation and industry growth by facilitating collaboration between tech businesses, industry leaders, academia and government.

The **Centre for Research & Innovation in the Bio-Economy (CRIBE)** is an independent, not-for-profit research corporation supports turning research results and innovative business opportunities into reality.

**Ingenuity Accelerator** is Lakehead University's first student business incubator space that helps take start-up concepts from ideation to innovation.

## Knowledge & Development Partners

**Collège Boréal** is a French language post-secondary institution based in northern Ontario with research expertise in agricultural sciences, new agri-food technologies and biodiversity protection.

**Lakehead University**, with campuses in Thunder Bay and Orillia, is a comprehensive university with high-quality programming and a focus on research and innovation.

## Northern Ontario Advisory Committee\*

This committee of knowledgeable and experienced stakeholders from across the region helps provide input on direction and programming to help drive food and agri-tech innovation in the North. Committee members represent the diversity of industry and communities in the North, and use their respective networks to help increase visibility and profile for the Northern hub regionally and nationally.





## Success story

### Building partnerships in northern Ontario

*This partnership will help bring innovations in cleantech, ag-tech, forest bioproduct and bio-economy technologies to market as part of Ontario's re-imagined bio-economy.*

Through a new partnership with the Centre for Research & Innovation in the Bio-Economy (CRIBE), based in Thunder Bay, Bioenterprise will deliver enhanced innovation commercialization services for the forestry and agriculture sectors.

Launched in mid-2021, this partnership will help bring innovations in cleantech, ag-tech, forest bioproduct and bio-economy technologies to market as part of Ontario's re-imagined bio-economy. Several innovative sector projects are already underway.

Bioenterprise is also collaborating with CRIBE and its forest industry partners, including First Nation communities, to support the successful implementation of Ontario's and Canada's low carbon and forest sector strategies.

### \*Northern Ontario Advisory Committee members:

**Kim Jo Bliss**, Ontario Crops Research Centre – Emo, University of Guelph

**Brent Cadeau**, Northwest Beef Co-op/Beef Farmers of Thunder Bay/Beef Farmers of Ontario

**Denis Castonguay**, Coopérative régionale Nipissing-Sudbury

**Norman Jaehrling**, White Lake Limited Partnership, Pic Mobert First Nation Venture

**Alyson MacKay**, Ingenuity, Lakehead University's Business Incubator

**Sean Murray**, Nor'wester Maple Company/Canada West Maple Products

**Stephanie Vanthof**, Ontario Federation of Agriculture, Northeastern Ontario

# The Prairies

## Regional offices

Winnipeg, Manitoba;  
Calgary, Alberta

## Strategic Regional Partners

**Enterprise Machine Intelligence & Learning Initiative (EMILI)** is an agriculture artificial intelligence accelerator based in Manitoba that was founded to support agriculture in the province.

**Platform Calgary** is a hub that brings together the resources of Calgary's tech ecosystem across various sectors to give start-ups the tools they need to launch and grow.

**Innovate Edmonton** leverages, unites and promotes home-grown innovation as a gateway to solving the world's most pressing problems.

## Knowledge & Development Partner

**Olds College** is one of Canada's leading agricultural schools, offering high-tech, hands-on learning experiences that lay the foundation for solving real world problems in farming, food and land.

## Program delivery

### Alberta Yield

The Alberta Yield program pairs founders and leaders of start-up businesses with experienced business and tech advisors who provide them with mentorship and coaching. Launched earlier this year, 32 agriculture and food tech start-ups have taken part in two cohorts of support programming through Alberta Yield so far.



## Success story

### GroundUp eco-ventures

*The Alberta Yield connection gave him access to Bioenterprise's team of mentors, and he was able to seek out the expertise he needed to help with product development, distribution and other aspects of business.*

For most Canadians, starting the morning with a coffee or winding down with a cold beer is a regular part of their daily routine. What's left after producing those popular beverages generally ends up in landfills or as compost - something that Alberta's Shawn Leggett is working hard to change.

He upcycles spent coffee grounds and grains left over from brewing into super flours, healthy baking mixes and sustainable oils through his newly launched business in Okotoks, GroundUp eco-ventures.

It's no small feat to build a brand new business from scratch, especially not in an emerging field like upcycling and circular economy that, as of yet, has few players in the Canadian market. That's where Leggett considers himself lucky to have been part of the first cohort of the Alberta Yield program.

"When you're in a program with other entrepreneurs, it is great to hear their stories and know you're not alone in what you're facing - the same hurdles, the same battles," he says. "It was great to hear other peoples' perceptions and knowledge, and I gained a lot of insight into things like marketing, forecasting and data."

The Alberta Yield connection gave him access to Bioenterprise's team of mentors, and he was able to seek out the expertise he needed to help with product development, distribution and other aspects of business. Although the cohort has now ended, Bioenterprise is continuing to offer support through the Engine's network where possible.

"As a business owner, that's really beneficial," he believes.

The full GroundUp eco-ventures success story is available at [www.bioenterprise.ca](http://www.bioenterprise.ca).

# British Columbia

## Regional office

Kelowna,  
British Columbia

## Knowledge & Development Partners

The **University of British Columbia** is a global centre for teaching, learning and research, and is consistently ranked among the top 20 public universities in the world.

**University of the Fraser Valley** is located in the heart of one of Canada's agricultural hotbeds with a wide range of agricultural and agri-tech programs.

## Industry Partner

The **Small Scale Food Processors Association** supports independent food processors and growers across Canada with advocacy and government relations, marketing, networking, education and a member benefit program.

## Collaborative Partners

**SFU VentureLabs** is a world-class technology business accelerator program delivered by Simon Fraser University with partners across Canada.

**WestGrid** is one of four regional HPC consortia that support the Compute Canada national platform of supercomputing resources, which brings together computer and data facilities, computational expertise, and hundreds of academic researchers to tackle some of Canada's biggest research challenges.

## Program delivery

Bioenterprise is not yet delivering programs in British Columbia but is actively exploring options, with a particular focus on opportunities that support underrepresented groups, address new industry challenges and build capacity in agriculture.



## Success story

### Organic Path

*It's all about stepping it up and Bioenterprise has played an integral role in what we've been able to accomplish.*

A British Columbia start-up is working to bring two new technologies to market that could make field crops harvest-ready faster while also regenerating the soil.

Organic Path Inc. (OPI)'s flagship product is a biostimulant of natural minerals, vitamins, oils, and extracts that enhances plant growth and health. The surfactant can also more efficiently deliver other inputs like nutrients or crop protection directly to plants or into the soil. A photoacoustic laser technology that allows plants to absorb nutrients faster complements the biostimulant.

"This product helps to increase yields to farmers, but also reduces chemical inputs going into soils," explains Organic Path co-founder Tyler Mackay.

The biostimulant is already commercially available in the United States, but the company is currently working to bring both the laser and the laser-biostimulant combo technologies to market.

A representative from the Ag Ventures Accelerator Program run by the BC Ministry of Agriculture connected them to Canada's Food & Agri-Tech Engine.

That included an introduction to an accounting firm, a financial company to help with sourcing funding, and a consultant who has been helping them navigate the regulatory process to get their product registered with the Canadian Food Inspection Agency (CFIA).

Bioenterprise also connected Organic Path with Olds College, where the company is now conducting additional research on its technologies to prepare for a new funding application.

"It's all about stepping it up and Bioenterprise has played an integral role in what we've been able to accomplish," adds co-founder Mark Shuster. "All their suggestions have been very, very good, and their team has been top-notch to work with."

The full Organic Path success story is available at [www.bioenterprise.ca](http://www.bioenterprise.ca).



## National and international activities

# Supporting innovation from coast to coast

Through its network of strategic partnerships, Bioenterprise has collaborated to host a series of innovation-focused national events. They are designed to encourage networking, raise awareness of the opportunity and potential of innovation in the food and agri-tech sector, and showcase innovative companies working to bring new ideas to market.

### Ag Innovation Showcase Canada

Hosted by FCC and Bioenterprise, this virtual event attracted 160 participants nation-wide who heard presentations from 11 up-and-coming Canadian agri-tech companies as well as two industry panels and participated in networking opportunities.



*"In total, the series attracted over 1500 participants from across Canada and the United States"*

### AGRI Tech Venture Forum 2021

Bioenterprise was a sponsor of this annual event, hosted by Critical Path, which attracted 300 delegates to a virtual format this year. That included 22 companies who presented pitches, 47 investor groups and corporate strategic firms, and 86 entrepreneurial delegates.

### Atlantic Venture Forum 2020

A sister event to the AGRI Tech Forum, this digital event featured an agricultural stream for the first time and attracted 300 attendees, including speakers, presenting companies, exhibitors and participants. As an event partner, Bioenterprise took part in several sessions as host, panelist or presenter. The new company showcase portion of the event was managed by Bioenterprise partner Innovacorp and featured GreenShoots program participants.

### Future of Food 2.0

Together with Enterprise Machine Intelligence & Learning Initiative (EMILI), Bioenterprise co-sponsored a three-part virtual event series called Future of Food 2.0. The events were delivered by Bioenterprise collaborator CityAge, who specializes in promoting thought leadership through impactful events.

Session topics included: Building food security amid a changing climate, Data to drive better food outcomes, and Accelerating start-ups and SMEs. In total, the series attracted over 1500 participants from across Canada and the United States; planning for new Future of Food events is underway.





## National and international activities

# Global connections

Although the national network is at the heart of Canada's Food & Agri-Tech Engine, its connections extend beyond the country's borders.

Bioenterprise had frequently attended events and meetings globally, including Australia, France, Germany, Singapore, the United Arab Emirates, the United Kingdom and the United States, before COVID-19 moved those activities online. The pandemic also halted Bioenterprise's delivery of the CanExport program and hosting international delegations during their visits to Canada.

**4000+**  
global connections



## Future facing

# Focus on the future

A leading priority for Canada's Food & Agri-Tech Engine continues to be network growth. That includes attracting new members and partners, delivering new programs, monitoring national and international innovation trends, and constantly seeking new opportunities to advance innovation in the sector.

## Inclusivity and equal opportunity

Bioenterprise actively champions inclusivity and equal opportunity. That includes continued efforts to support and enable equal representation for women in agriculture, our commitment to close service gaps and strengthen entrepreneurial capacity for women- and Indigenous-led businesses in agriculture, and encouraging opportunities to engage young people and attract them to careers in the sector.

## Increasing membership reach and scope

A leading priority for Canada's Food & Agri-Tech Engine continues to be network growth. That includes attracting new members and partners, delivering new programs, monitoring national and international innovation trends, and constantly seeking new opportunities to advance innovation in the sector.

Bioenterprise continues to evolve by developing programs to support underrepresented groups, address new industry challenges and build capacity in agriculture. Rooted in networking, education and engaged partnerships, this approach has helped build a robust commercialization ecosystem and continuum of support for a diverse group of agricultural entrepreneurs across the country. The economic impact of Bioenterprise for these groups is demonstrated by the success of clients in expanding their businesses by creating jobs, increasing revenue and attracting investment.

## Sustainability through innovation in the agri-food value chain

In 2015, the United Nations set 17 sustainable development goals for food and agriculture to achieve by 2030. These goals are the world's blueprint for achieving a better, more sustainable future for our planet. Bioenterprise, Canada's Food & Agri-Tech Engine, is committed to working toward these goals by helping to shape the future of sustainable innovation and net zero production in the agri-food and agri-tech sector.

Sustainable innovation starts on the farm and follows the entire agri-food value chain right through to the consumer. It includes focus on areas such as:

- Holistic animal health and welfare
- Improving soil health and crop yields through regenerative agriculture
- Decreasing water use
- Sustainable packaging systems
- Renewable, sustainable bio-based energy
- Clean production and eco-friendly ingredients
- Waste reduction through circular economy principles



**Canada's Food & Agri-Tech Engine** actively supports sustainability through innovation and is actively seeking new partnerships, initiatives and opportunities to help shape the future of sustainable food and agri-tech in Canada.

These kinds of innovations will increase the sustainability of the food system by reducing its global environmental footprint and supporting net zero production, while also boosting food security and food safety.

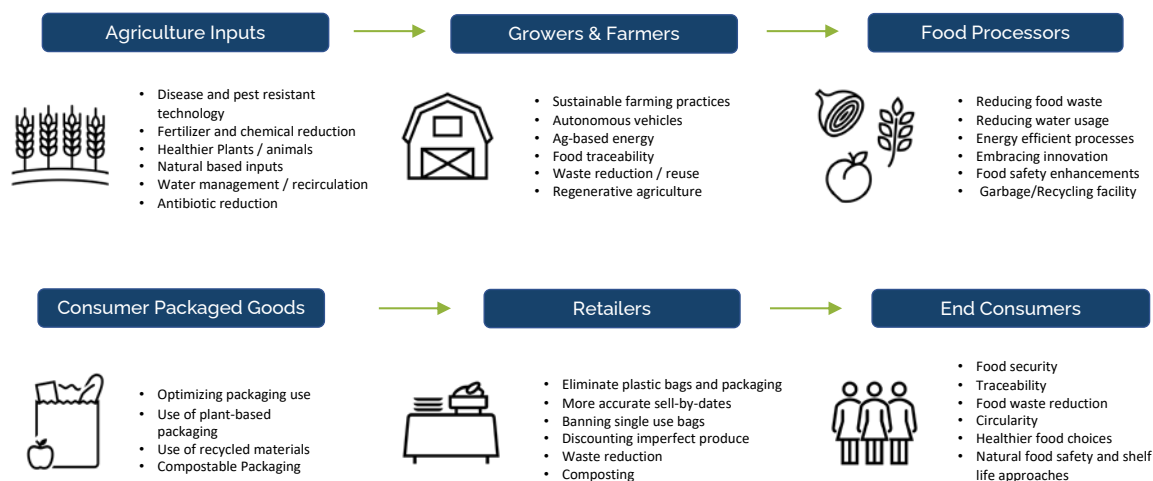
### On the farm

Farmers turn to innovation to improve production and solve challenges on the farm, like using less fertilizer, fuel, water, and crop protection, materials, reducing dependence on labour, improving animal health and welfare, or diversifying their market opportunities through niche products. Some on-farm innovations also have positive societal benefits, such as reducing soil erosion, minimizing crop loss and waste, or lowering greenhouse gas emissions.

### At processing

Food manufacturers use innovation to respond to evolving consumer demands for better food safety, longer shelf life, less waste, and food products with added nutritional benefits, better taste and increased convenience. At the same time, food business must pay attention to profitability, competitiveness and sustainable production practices.

## Applying sustainable innovation from the farm to consumers





## The roadmap to innovation's global top 10

As a result of the Barton Report, the Canadian government set an ambitious target to grow Canadian agri-food exports from \$55 billion in 2015 to at least \$75 billion by 2025. Key to making this happen is the support and promotion of agriculture and food innovation programs with a well-resourced and well-connected national ecosystem.

Canada has the potential to be among the top 10 most innovative nations worldwide. The country is already the world's fifth largest agricultural exporter and by encouraging collaborative innovation on a national scale, as recommended in the Barton Report, we can become the trusted global leader in safe, nutritious and sustainable food in the 21st century.

To make that target a reality, the report recommended the creation of a networked centre or hub for agri-food innovation that connects agri-food innovation centres to help firms of all sizes scale up, develop new products and processes and access new markets.

This directly aligns with the driving goal of the Engine and what we are working to achieve: the creation of a national food and agri-tech network to elevate Canada's innovation performance globally.

Many exciting regional or sector-specific innovation initiatives across the country are already underway and through the Engine, we are building a dynamic and globally competitive innovation ecosystem that will have meaningful impact at home and abroad.

“

*We can realize the goal of getting Canada into that top 10 by uniting our fragmented national innovation ecosystem with a single, focused approach and leveraging our growing network of national and international connections and partnerships.*

*The Engine is the first step on this roadmap of raising Canada's global food and agri-tech innovation profile and realizing the potential Barton identified in his report. As the Engine grows, the number of new businesses accelerated into the marketplace will expand dramatically and the impact will be compelling.*

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