SUSTAINABLE DEVELOPMENT TECHNOLOGY CANADA

SEED FUND PROGRAM

DEALBOOK

SPRING 2021

Government of Canada
Trade Commissioner Service

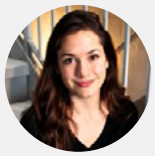
Gouvernement du Canada
Service des délégués commerciaux

SUSTAINABLE DEVELOPMENT TECHNOLOGY CANADA
TECHNOLOGIES DU DEVELOPPEMENT DURABLE CANADA

Canada

TABLE OF **CONTENTS**

CONTACTS



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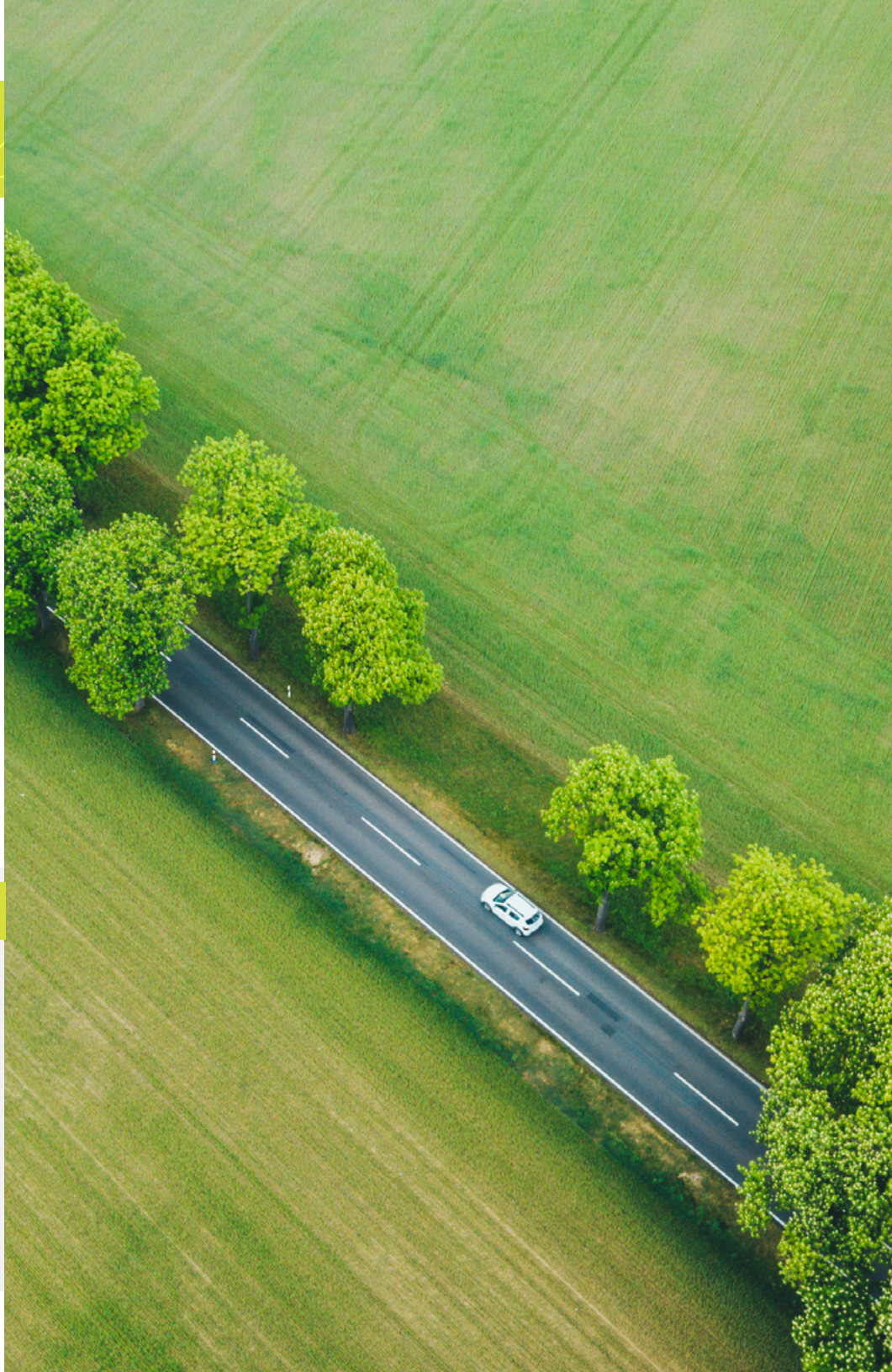

MESSAGE FROM **SDTC**

Climate change matters.

Climate change poses enormous risks to both the economy and the financial system. Climate commitments call for the halving of global greenhouse gas emissions by 2030. To do this, every sector of the global economy needs to transform in just over two business cycles.

The pandemic has shown us that rapid commercialization and adoption of good science and technology is eminently doable. Cleantech has seen huge changes over the past three years and the pandemic has accelerated and amplified these changes in US and Canada.

Clean technologies have the power to transform the world.

Canadian entrepreneurs have what it takes to lead that transformation. Where others see waste, they see source material. When others see broken systems, they see market gaps to be filled. In this time of economic uncertainty, they are charging ahead. What these entrepreneurs need is funding, connections, and partners to help accelerate commercialization and widespread adoption. That's where SDTC comes in.

SDTC is the largest funder of cleantech small and medium enterprises in Canada.

We find, fund, and foster the entrepreneurs who will lead the transition to a zero-carbon, zero-waste economy.

Moving at the speed of business, we catalyze cleantech innovation at every stage: with seed funding to identify emerging innovations; with start-up support to develop and demonstrate these innovations; and, with scale-up investments to give firms the final nudge toward commercialization, adoption, and market leadership.

The innovations we fund help solve the most pressing environmental challenges: climate change, clean air, clean water, and clean soil. Since 2001, our companies have reduced GHG emissions by 19.3 megatonnes annually – equivalent to taking almost 6 million cars off the roads every year.

Investing in Trailblazers.

We partner with leading accelerators and incubators across Canada to identify the entrepreneurs who will become tomorrow's cleantech leaders. SDTC's Seed Fund supports promising early-stage Canadian companies with one-time grants of $50,000 to $100,000 for innovative technologies with environmental benefits.

Seed Fund recipients are taking the first steps to commercialize their idea and have raised at least twice the amount of the funding granted by SDTC through private equity sources. They have completed their R&D and have gained serious attention from investors.

We are excited to partner with Global Affairs Canada to present a select number of companies in our portfolio who have the game changing solutions you may be looking for.

At SDTC, we are unflinching champions of our companies. It is an honour to work with these inspiring leaders and their ideas and we are committed to doing everything we can to enable their future success. We are thrilled to have you join this mission.

Zoë Kolbuc

Vice President Partnerships & Ecosystem Development

ABSOLUTE COMBUSTION INTERNATIONAL

The First Zero NOx Burner that Reduces Operating Cost by Up to 70%

Leduc, AB

absolutecombustion.com

PRODUCT SUMMARY

Absolute Combustion International (ACI) has developed a near-flameless, high-intensity, energy efficient burner that generates industrial scale heat with dramatically reduced fuel consumption, greenhouse gas emissions and operating costs. To date, ACI's patented burner and combustion technology has surpassed all customer requirements and expectations. When compared to existing technologies, ACI has consistently delivered the required heating while consuming up to 72% less fuel and generating 35% fewer greenhouse gas emissions.

CUSTOMER

Our customers are airlines, and ground servicing companies that are located in cold weather locations such as Canada, United States, Europe and Asia. The reason they would purchase this equipment in aviation is because heating carts are mandatory on aircraft when the temperatures drop below -10 degrees C. The water lines on the plane could burst without this equipment. ACI offers a competitive advantage over traditional heat carts due to is effective capacity to heat a plane into -50 temperatures using only 8.5L of fuel without any support equipment.

SEEKING

Absolute Combustion is hoping to gain a strategic partner capable of investing in the company and helping us penetrate the American market with our technology. We are currently seeking $1.5M USD to build a leasing fleet.

MARKET SIZE

$470 MILLION
TAM

Source: Fortune Business Insights

IMPACT

By 2025, we are estimated to sell or lease 1,025 units.

TRACTION

To date, Absolute Combustion has commercially sold units across 3 different industry actors, recycling, oil and gas and aerospace. In the oil and gas space, we commercialized our product with a company called Imaginea energy who contracted with us to sell 17 additional units to their company in 2017. In aviation, we have sold multiple units between airports and service companies. We have a potential order for 7 units to a major northern airline for the fall that we are 90% of the way to securing. Our partnership with the Edmonton International Airport strengthens our position in the aviation space as we have direct access to any C suite executive to discuss commercial trials and sales of the product and the endorsement of a major international airport to add additional credibility to the product line.

TOP TAKEAWAYS

1. We have patented ground-breaking technology with market demand generated within Canada. We have brought in $1M USD in revenue to date.
2. We have a solid partnership with a major international airport to support market adoption and make introductions to key players in the space
3. We are a small and agile team willing to work and do what it takes to make this company a success.

LEADERSHIP

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BIO-STREAM DIAGNOSTICS

Providing a 30-Second Test for COVID-19 with a Point of Care Device

Bio-Stream Diagnostics Inc

Edmonton, AB bio-stream.ca

PRODUCT SUMMARY

Bio-Stream Diagnostics Inc. is developing the Bio-Stream COVID Test, using a novel platform for molecular based pathogen detection. We utilize next-generation Surface Enhanced Raman Spectroscopy (SERS), machine learning, and customized chemistry to return highly accurate results in 30 seconds. The testing device is portable and very simple to use, making it ideal for on-site mass screening applications. Test results are captured on a trusted server and can be shared through a mobile Status Pass APP.

Beyond COVID-19, this technology may be broadly utilized for the detection of other pathogens that impact either human or animal health.

CUSTOMER

Our customers need to quickly, effectively, and regularly screen large volumes of people on-site for the presence or absence of COVID-19. They could be a large industrial complex with hundreds of employees, in the entertainment and hospitality industries, a large shopping mall, or an airport.

SEEKING

We are currently setting the table for a $10M USD Series A round of investment.

Additionally, we are seeking early adopters of our technology. This includes organizations based in North America, who need to regularly and routinely test large numbers of employees or customers for COVID-19.

MARKET SIZE

$84.4 BILLION
TAM

Source: Grand View Research

IMPACT

With 1,000 units in the market, over 1.5 million people can easily be tested daily and $45 million in revenue generated each month.

TRACTION

There is an urgent global need for a COVID-19 test suitable for mass screening applications. Our technology is internally tested and proven successful. We are currently working through governmental approvals in Canada (Health Canada) and the United States (FDA).

TOP TAKEAWAYS

1. This is a revolutionary testing process specifically designed for mass screening applications. Fast, accurate, affordable, portable and simple to use.
2. Our world-class development team includes 6 Ph.D.'s, with a depth of expertise in spectroscopy, virology, machine learning, industrial design, and engineering.
3. Senior leadership has decades of experience managing and leading startups and midsize companies from conception to exit.

LEADERSHIP

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CALOGY SOLUTIONS

Enabling EVs to Go Further, Be Safer and Cost Less

Sherbrooke, QC calogysolutions.com

PRODUCT SUMMARY

We are developing low cost and patent pending thermal management solutions for Li-ion batteries in electric vehicles called TGP (thermal ground plane) as well as cold plates and thermal switches. Keeping the battery cells in the recommended temperature range will lead to a 5% decrease in battery pack cost due to less cell degradation overtime, two years increase of battery life-time (caused by more cell temperature uniformity) and 20% more driving range due to less energy required for battery self-heating in winter.

CUSTOMER

Based on our market validation efforts we have concluded that passenger electric vehicles are the most favorable market sector with highest total product-market fit for our TGP technology, followed by electric commercial/industrial vehicles and electric bus markets. However, despite its attractive market value, the passenger electric vehicle market is extremely competitive and regulated. The markets for commercial/industrial (including recreational vehicles) on the other hand are niche markets with much less competition, less regulation and lower production volumes, allowing a start-up company to gain experience before entering major automotive markets.

SEEKING

Our business model is based on collaboration with potential customers to first integrate our thermal management system in their products and then to sell them our products. Therefor, we seek strategic partners to co-develop battery packs with our TGPs. Moreover, we are planning to raise $2M USD at the end of year 2021 allowing to seek $6M USD in grants for commercialization phase.

MARKET SIZE

$7.2 BILLION
TAM BY 2023

Source: Yole Développement (2018)

IMPACT

Range anxiety, safety and high price are the main obstacles in the electric transport market adoption and our solution addresses all these concerns.

TRACTION

Our gen-zero TGPs are currently being tested in an EV truck belonging to our collaborative joint development partner.

We are negotiating with a large Canadian recreative vehicle manufacturer and a South Korean battery pack manufacturer to integrate our thermal management technology in their products.

TOP TAKEAWAYS

1. Selected among the five finalists in the “Charging the Future Challenge” for battery innovations due to its battery thermal management system. Have received $700,000 USD and in competition for $1M USD award.
2. Innovative technology with multiple patent applications and prototypes being tested in EVs on road.
3. Raised $1.4M CAD in pre-seed for prototype development and pre-commercialising.

LEADERSHIP

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DIRECT-C LIMITED

Remote Asset Condition Monitoring through Intelligent Coatings

Edmonton, AB direct-c.ca

PRODUCT SUMMARY

With a large portion of the world's aging industrial and civil infrastructure reaching end of life, the replacement costs over the coming decades can be exorbitantly expensive. Direct-C's proprietary HAAS (hardware-as-a-service) nanocomposite coatings and IIot solutions can be deployed on assets within these sectors to sense any damage, excess strain or chemical exposures that may threaten their integrity. The information collected by these sensors provides the asset owners critical intelligence about their asset conditions and helps them maximize the impact of their maintenance and repair budgets.

CUSTOMER

For the first market, oil and gas, our customers are oil facility operators who want to maximize their system throughput (low unplanned downtime) while minimizing environmental impact due to leaks by immediate detection of very small leaks. The current systems they use primarily detect larger leaks due to ruptures rather than pinholes. In our secondary market, pharmaceutical, the customers are manufacturers which use dangeorus aqueous solutions in their processes and are concerend about small leaks from flanges and fittings.

SEEKING

With some momentum building in our first market vertical (oil & gas), our next main strategic goals are two-fold: seek interested VC's for our $5M USD Series A round targeted to close summer 2021 and strategic partners in the pharma and aerospace/ defense sector to guide the productization of our current prototypes for those markets.

MARKET SIZE

$2.47 BILLION
TAM

Source: Internal Market Opportunity Assessment

IMPACT

We have the opportunity to become the de-facto leak detection solution for oil facilities in environmentally sensitive areas.

TRACTION

In our oil and gas market, we have secured contracts with oil majors like Suncor, CNRL, Alaska Pipeline and have deployed 40 systems on their networks.

TOP TAKEAWAYS

1. Direct-C has developed a patented, platform nanocomposite coating sensing solution which has broad applicability in monitoring the health of assets in the oil and gas, pharmaceutical and aerospace among other markets.
2. The second major part of our technology capability is a proprietary IoT solution that allows us to monitor the coatings we deploy anywhere around the world through cellular or satellite connectivity. A sophisticated back end, server based data management tool is used to configure and monitor all our systems and provides our customers access through dashboards.
3. We have a number of coatings solutions for detecting chemicals (particularly oil and water) as well as physical damage and strain but the first commercially deployed solution is for oil detection from the world's oil infrastructure. The next focus is on water leak sensing from pharmaceutical process equipment.

LEADERSHIP

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G2V OPTICS

Data-driven Lighting for the Most Valuable Applications

Edmonton, AB g2voptics.com

PRODUCT SUMMARY

G2V's core business is delivering smart lighting solutions to applications where precision and control are paramount. We aspire to deliver the highest ROI to the world's leading innovators in solar energy and indoor cultivation.

Our Perihelion™ platform is a responsive lighting/monitoring/control system that maximizes crop output and chemistry by replicating geographic conditions, monitoring, and adjusting in real-time to optimize commercial horticulture. Our Pico™ and Sunbrick™ products are the leading sunlight replication tools used by top tier technology, aerospace and academic institutions to test next-generation solar cells and materials.

CUSTOMER

Our ideal customers are technologically advanced, large-scale, controlled-environment agricultural producers (indoor and vertical farms). They will use our product in two ways:

- As a precision lighting product that dynamically matches the lighting needs of their specific cultivars throughout a growth cycle.
- As an integrated monitoring solution to improve their crop management capabilities through intelligent, timely, and actionable alerts to optimize their growth conditions.

SEEKING

G2V is executing on key milestones toward a Series A financing in the range of $5M USD in late 2022. In 2021, we are seeking to develop relationships and mutually qualify early-stage investors with specific interest in enabling AgTech and solar renewable energy solutions. This year we are also developing strategic partnerships with indoor full-farm technology providers and incumbent lighting/monitoring/control players who can benefit from the integration of cutting edge technologies.

MARKET SIZE

$2.5 BILLION
TAM

Source: Verified Market Research/VMR)

IMPACT

G2V will enable 30%+ more indoor farm production while eliminating 20 $ktCO_2eq$/ year of emissions by 2025.

TRACTION

G2V has demonstrated 30%+ increased in plant growth controlled by lighting algorithms and camera-monitored traits. In less than two years, the company scaled from zero to over $2M USD in sales to global leaders in aerospace, technology and agriculture.

TOP TAKEAWAYS

In two years, G2V bootstrapped a game-changing smart lighting technology to over $1M USD in revenue before closing $1.4M USD seed financing and another $1M USD in sales. The world-leading nature of the proprietary technology is validated by a tier one customer list across 20+ countries representing top names in technology.

During the COVID-19 crisis, G2V leveraged existing investors and new funding to raise a further $2M USD in funds, enabling G2V to operate from a position of strategy and strength through 2022 while expanding the platform-based recurring revenue opportunity and enterprise value leading toward the next phase of growth.

LEADERSHIP

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HEAD OF MARKETING

MECHASYS

Laser Speed Layout

Montreal, QC mechasys.ca

PRODUCT SUMMARY

At Mechasys, a team of engineers and contractors developed together an innovative laser projector that displays construction plans in real scale directly on construction sites. Using laser positioning technologies, we project construction drawings on floors with an accuracy of 3mm. With our system, workers no longer need to draw plans on construction sites. It speeds up the productivity rate on construction sites, reduces the human risk, and optimizes the entrepreneur's profits.

CUSTOMER

Our ideal customer profile is a subcontracting company in the construction industry that self-perform the work of layout. Mostly within the range of 25-250 employees, our customers can perform work in the wall and ceiling industry, MEP (mechanical, electrical, plumbing), tile and terrazzo and more. Regardless of the sector (commercial, multi-residential, institutional), the FRAMR can offer value for a large portion of the contractors in North America.

SEEKING

Mechasys intends to raise a $4M USD equity round in 2021-Q2 to de-risk our manufacturing and to validate our business model in North-America and Japan. We aim to connect with investors that believe in our vision by deploying capital and offering strategic advices for the growth of Mechasys.

MARKET SIZE

$81 BILLION
TAM

Source: Mechasys (2021)

IMPACT

By the time we reach scale in 2023, we expect to serve more than 250 construction companies with the FramR to them reduce their labor cost on measuring and rework by up to 80%.

TRACTION

We have built a pioneer program that consists of a select group of 15 contractors in Canada, the USA and Japan. This Pioneer Program will generate over $1.8M USD in ARR and 3.3M USD of one-time sale over the next two years. Nevertheless, our reach goes beyond the pioneer program. Right now, we have interest from a broad range of contractors in the world that totalize $21.5M USD ARR and $39M USD one-time sales opportunity.

TOP TAKEAWAYS

1. Our vision is to build software intelligence to allow robots to make critical decisions on the job sites.
2. We signed a major contract with specialty contractors and general contractors in Canada, the United States and Japan.
3. We have built a team of 12 experts in hardware/software/construction.

LEADERSHIP

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OMNIPLY TECHNOLOGIES INC.

Delivering Flexibility to Rigid Electronics

Montreal, QC omniplytech.com

PRODUCT SUMMARY

Omniply provides a platform to enable companies to design and fabricate thin film electronics by utilizing existing traditional rigid electronic manufacturing process. Omniply's technology enables transfer of thin film devices — such as sensors and displays — from a rigid surface to a flexible form with low cost of implementation, high efficiency and high yields and with substantially lowering the GHG emissions.

CUSTOMER

We serve the companies that fabricate thin film devices and want to deliver flexible electronic products to their customers. These companies already have existing infrastructure for electronic fabrication, and only needs a better, cheaper, and more efficient way to transfer their electronics onto a flexible platform. By incorporating our solution into their manufacturing line, they are able to lower the end cost of their products and improve their yields. Potential customers would be Samsung, LGand BOE.

SEEKING

Our goal is to raise $3.5M USD to scale our technology with partners and rapidly commercialize the technology working with top display manufactures. We are also seeking industrial partners to collaborate with to develop flexible electronic devices. Our vision is to reduce today's manufacturing carbon footprint and decrease manufacturing cost and complexity for future flexible devices.

MARKET SIZE

$850 MILLION
TAM

Source: IDTechEx

IMPACT

By the time we reach scale in 2025, we expect to be the transfer technology of choice used by all major panel makers for making flexible displays.

TRACTION

Strong traction from display and electronics lead suppliers to partner with Omniply to provide end solution. We have raised $800,000 USD in equity-based seed funding and $100,000 USD in grant from SDTC. In addition, we were awarded the CES 2020 Climate Impact Honoree Award for sustainability aspects of our solution.

TOP TAKEAWAYS

1. Omniply's solution enables all form of flexible electronics and makes them accessible to people. Our technology spun out from Stanford and Purdue University focusing on enabling flexible sensors for IoT applications and flexible displays
2. Omniply aims to innovate bringing new applications to market by improving the manufacturing process from cost, performance, and environmental impact. Given the scale of flexible IoT sensors and displays expected to be made globally Omniply can significantly impact the waste/GHG emissions produced thus truly innovating technology with a smaller carbon footprint on the environment.
3. We have a team of competent and motivated individuals with a wide range of relevant experience, which has enabled us to attract leaders in display industry to work with us as advisors. By leveraging all of the expertise, we have been able to gain strategic interest from major supply chain partners and end use customers.

LEADERSHIP

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PANI ENERGY

AI Operator Coach™ Optimizing Water & Wastewater Plant Operations by Up to 25%

Victoria, BC panienergy.com

PRODUCT SUMMARY

At $0 CAPEX, water and wastewater plant owners and operators can bring up to 25% improvement in plant performance (e.g. reduced energy cost, higher uptime) with Pani's AI Operator Coach™. As a new member of your plant's O&M team, the AI Coach™ works tirelessly to help guide fellow operators, engineers, managers and executives to make the right decisions at the right times. Detecting faults, prescribing optimization opportunities and predicting future events so your operations team can reduce plant risk and treat more water with fewer resources.

CUSTOMER

Our target customers are treatment plant owners that care about having their plant run at high efficiency, that means lower operational costs, high uptime, high stability and reduce risk of going over compliance. Customers span desalination, brackish water, and wastewater treatment and reuse.

We work best with plants that deploy membrane, chemical and biological treatment technology, covering 95%+ of the water and wastewater treatment markets.

We engage with private end-users (F&B, heavy industries, utilities) and fast moving municipal operators.

SEEKING

We are seeking private end users for deployment of our AI Coach solution, as well as industry specific and regional partners to resell our solution including white-labeled options.

We are currently raising our seed round of $3.14M USD in addition to our $2.20M USD funding from SDTC, for a total fundraise of $5.35M USD. We have a lead secured and are looking to fill in remaning $2.06M USD.

MARKET SIZE

$1.8 BILLION
SAM

Source: 60,000 plants in SAM

IMPACT

By 2024 we aim to serve 500+ plants. We believe we can accelrate the entire water sector to net zero, reducing 1 GT/year CO_2 by 2030.

TRACTION

We have running pilots with Fortune 500 companies and secured 18 deployments in different stages (500+ assets) across our markets in the U.S., Canada, India and SEA. We have received $2.8M USD funding from SDTC, secured private investments and partnerships with well reputed players in the market. Most of the large private water players have reached out to us for engagements.

TOP TAKEAWAYS

1. We are leading advanced analytics and machine learning space in water and wastewater treatment. A market that almost all industry players and market intelligence organization predict to be the next big thing for water.
2. We have a software-as-a-service model ($0 CAPEX) allowing us to reduce the barrier of adoption for our customers.
3. We were labeled as "Top 5 Most Disruptive Technology" by Global Water Intelligence in Paris; won "Imagine H2O" (San Francisco) Demo Day in Singapore; and recognized with a "Rising Star Award BC" in Canada in 2020.

LEADERSHIP

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PHYCUS BIOTECHNOLOGIES INC

Helping Skincare Brand Owners Make Clean Cosmetics from Sustainable Ingredients

Toronto, ON phycusbio.com

PRODUCT SUMMARY

Our mission is to develop sustainable ingredients that align with the environmental and skin health focus of brands reformulating their skincare products. Our first product is a 70% Glycolic Acid ingredient used as a formaldehyde free, biobased, replacement for conventional glycolic acid. Conventionally, glycolic acid is made from either formaldehyde or monochloracetic acid, both petroleum products. Formaldehyde is usually left as a contaminant in the end product as a result of the manufacturing process. This is something that today's consumers are becoming increasingly aware of. Our process uses 100% biobased raw materials.

CUSTOMER

Today, we make and sell glycolic acid as a premium ingredient to the skincare market. Our initial growth will be driven by sales to the beauty industry because brands in this vertical value sustainable ingredients and pay a significant premium. The use of natural and organic claims in beauty products is directly correlated with an increase in price that brands can charge. We help these brands produce a differentiated product in a highly competitive market.

SEEKING

We are looking to complete a $5M to $7M USD Series A round. We need acceleration capital at this point. We have customers looking to purchase product. But we do not have capacity. Our fundraising targets will enable us to acquire production capacity at toll manufacturers.

Our strategy is to target indie brands where we can charge a significant premium. As we grow the business, and our cost of goods decreases from economies of scale, we will then target the large consumer brands. Hence, we are also looking to initially meet with ideally smaller indie brands based in New York City and New Jersey.

MARKET SIZE

$470 MILLION
TAM

Source: Fortune Business Insights

IMPACT

We estimate that our fermentation derived glycolic acid has a carbon footprint that is up to 35% lower than the glycolic acid made from oil.

TRACTION

We have have commercial agreement in place with our first indie brand. This brand has also recently invested in our Seed Round. Our demonstration scale facility will come online in May 2021, and 50% of the production is already pre-sold.

TOP TAKEAWAYS

1. Phycus has developed a novel, patent pending fermentation technology for producing naturally derived ingredients for the cosmetics market. Glycolic acid is the first molecule in our portfolio ready for the market.
2. Glycolic acid is produced by only a handful of companies and is primarily made from non-renewable sources like formaldehyde. Being the only commercial producer of pure 100% biobased glycolic acid, Phycus is in a position to offer a unique product that aligns with the sustainability and natural focus of many brands. By doing so, we will develop a new category for glycolic acid and be the leader in the formaldehyde free category.
3. We have traction from small and large brands, distributors and cosmetic toll manufacturers that want our product. We do not have enough capacity to meet demand. We need, and are looking for, capital to scale the business rapidly.

LEADERSHIP

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REAZENT

High Efficacy Sustainable Input Products for Agriculture and Industry

Nova Scotia reazent.com

PRODUCT SUMMARY

One of the foremost challenges the world is currently facing is how to reduce the carbon and toxicological footprint of the materials and ingredients that consumers, industries, and agriculture use without compromising on their effectiveness and performance. They need high efficacy sustainable products that can be used as drop-in replacements for their synthetic counterparts or give substantially improved performance than existing organic inputs.

Our product is an organic input for agriculture to increase crop yield and control crop diseases in a wide range of crops. Farmers can buy this crop input as a soil additive that is either crystallized or condensed in water. This high efficacy crop input will replace petroleum-derived agrochemicals in conventional farming or low-efficacy organic inputs in organic farming.

CUSTOMER

Farmers are our central target customers. We have developed crop inputs that enable farming to become efficient and sustainable and mitigate climate change.

Synthetic pesticides and fertilizers are indispensable for agriculture. Economic loss in the absence of these inputs would be enormous. But they have huge carbon and toxicological footprints.

Organic crop inputs such as biofertilizers and biopesticides have risen as a safe and sustainable option in place of agrochemicals, but their low efficacy and variability in performance have prevented their widespread adoption. Organic agriculture is considered inefficient.

SEEKING

We are raising $2M USD in our Seed Round. We will use this fund to conduct field trials in the U.S., scale-up our production in a pilot plant, and hire R&D and business development employees. We are working with CROs and agricultural universities for field trials, but we are also looking for partnerships with farming companies and farmer's networks to conduct trials.

MARKET SIZE

$10 BILLION
TAM

Source: Transparency Market Research

IMPACT

By the time we reach scale, we expect to cover 14 M acres of agricultural land in the US.

TRACTION

We have received LOIs from a farming company based in the U.S. and another based in Canada. We have NDAs with four of the top ten agrochemicals companies in the world and we are currently in talks with a leading crop protection company for product trial and distribution agreement.

TOP TAKEAWAYS

1. The pesticides farmers use in their farms, the chemicals industries use for making downstream industrial and consumer products, and the cosmetics that consumers use – are examples of materials derived from petroleum. They are accelerating climate change, adversely impacting humans and livestock health and causing ecosystem disruption.
2. Our vision is to replace petroleum-based chemicals and low-efficacy organic ingredients used by farmers, industries, and consumers with sustainable and effective alternatives. These alternatives will not only mitigate climate change but also make agriculture and industries more efficient.
3. We have tested our product in greenhouse conditions and confirmed that it could replace certain synthetic pesticides from wheat farms and synthetic fertilizers or organic plant growth stimulants from kale and soybean farms. It also increased kale and soybean production by 10-20%.

LEADERSHIP

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SEEO2 ENERGY INC.

Converting Waste CO2 into Chemical Feedstocks and Fuels

Calgary, AB seeo2energy.com

PRODUCT SUMMARY

SeeO2 develops an economically viable process to convert waste CO2 to industrial feedstocks and value-added fuels. When coupled with low-carbon electricity, our net carbon negative emission process reduces at least 4x emission compared to the incumbent stream methane reforming technology. This process will be the underpinning technology for production of renewable industrial feedstocks (carbon monoxide, hydrogen, oxygen and syngas), a new standard for sustainable chemical processes. Furthermore, our process is modular and scalable with minimal utility requirements, making it well suited for remote or on-site applications. The technology is well suited for “on-demand” production of industrial gases, eliminating the need for large storage andtransportation of these gases.

CUSTOMER

Our target customers are green plastics, petrochemical and metal processing industries.

- Green plastics - Customers will integrate the technology into a process used for the production of superabsorbent polymers and thermoplastics. Our technology will transform waste carbon dioxide into key building blocks (carbon monoxide and oxygen) used for the production of a high value monomers providing a renewable feedstock for this process.
- Utilities and Petrochemical - Our technology will produce syngas for these customers that will be further processed to electrofuels. We have a committed industrial partner to field demonstrate our technology in this space.
- Metal processing - Customers in this space are looking for technologies that can provide them with clean hydrogen and carbon monoxide for processing metal ores and we currently have a committed industrial partner to field demonstrate our technology.

SEEKING

We are currently raising a seed round of $750,000 USD to advance our business and technology development. We will like to share this opportunity with potential investors and strategic partners.

MARKET SIZE

$43 BILLION
TAM

Source: Industrial Gases Market Report
NRC-National Science Library Project NO: dss19-045

IMPACT

Large-scale adoption of our commercial systems by end users such as green plastics petrochemicals producers, would significantly decrease their CO2 emissions equivalent to removing more than 50 million cars off the roads.

TRACTION

SeeO2 is a Techstars-backed company and has secured three committed field demonstration projects with industrial partners in Europe and North America. SeeO2 has been awarded the Eureka label by the EUREKA Secretariat for our project with Arcelormittal.

TOP TAKEAWAYS

1. Market Opportunity: The market for carbon monoxide, hydrogen, oxygen and syngas is $34B USD and expected to reach $43B USD by 2023. Our solution is applicable to a variety of industries, including manufacturing, automotive, chemical and energy, metals, plastics and more.
2. Unique Product: SeeO2 produces high-value fuels and chemicals in a net negative carbon process. Unlike other solutions, we reduce the electrical input need by 30% and our technology can tolerate impurities.
3. Protect the Planet: The world is facing a global crisis with the exponential growth in CO2 emissions. SeeO2 recycles CO2 emissions to foster sustainable production of chemicals and fuels in a net negative carbon process.

LEADERSHIP

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