



NEW BRUNSWICK INNOVATION FOUNDATION ANNUAL REPORT 2018

INNOVATION IS NO LONGER A LUXURY

In today's world innovation is a necessity. In order to compete with companies and concepts from around the corner or across an ocean, business owners, researchers and entrepreneurs have to be savvier, smarter and more ambitious than ever before. But they also need to be actively supported in their communities. At the New Brunswick Innovation Foundation (NBIF), we think of innovation as something that must be nudged and prodded ahead through helpful guidance and prudent assistance. It's more than just a buzzword to us - it's our purpose.

The NBIF is an independent non-profit corporation that specializes in venture capital and research investments.

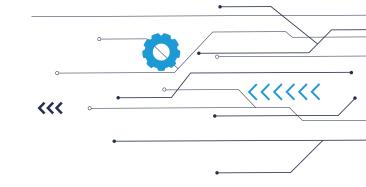
Dedicated to building innovation in our province, the NBIF delivers the resources and expertise required to achieve new

opportunities, growth, and advancements that will positively impact New Brunswick. With over **\$100 million** invested, plus **\$457 million** more leveraged from other sources, the NBIF has helped to create over 113 companies, fund 494 applied research projects, and recruit 72 professors to the province since its inception in 2003. All of the NBIF's investment returns go directly back into the foundation to be re-invested in other startups and research initiatives. New Brunswickers from St. Andrews to Shippagan are creating fascinating companies and studying complex problems every day. It's our firm belief that we all have an important role to play in helping them, and by extension our province, succeed. That's the NBIF mission.



With over \$100 million invested, plus \$457 million more leveraged from other sources, the NBIF HAS HELPED TO CREATE over 113 companies, fund 494 applied research projects, and recruit 72 professors to the province.

MESSAGE FROM OUR CHAIR

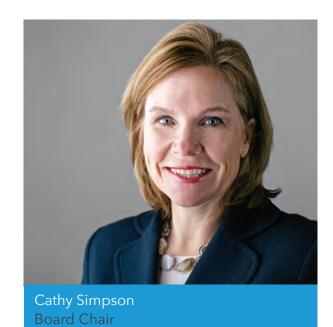


The NBIF has been investing in New Brunswick ideas and people for over 15 years. Over that time, we've helped launch successful companies and supported ground-breaking research. All of this has boosted our economy and helped make New Brunswick a more innovative place.

2018 was a period of change at the NBIF and we're excited to be entering the next phase in our journey stronger than ever. We are evolving, with bigger ideas, more collaboration and greater reach into every part of New Brunswick. New faces are bringing with them new spirit and new ways of helping this province grow.

We are grateful for the continued support and increased funding for the next three years. We remain focused on investing in companies and researchers who are developing innovative solutions for global problems and opportunities. We're also building the talent and skills of New Brunswickers and looking at ways to bring in more investors, talent and capital from outside our province.

As you review this annual report, I hope you will share the sense of pride that we all feel at the NBIF. Take the time to become familiar with these stories and the people that are making a difference here in New Brunswick.

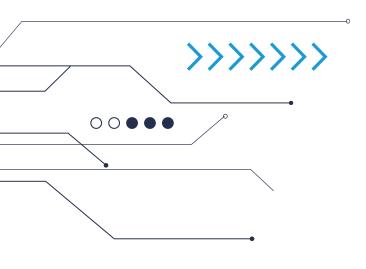


In the months ahead, you will be seeing a renewed NBIF. New leadership will build on our past successes and help define the possibilities of our shared future in New Brunswick.

It's an exciting time. Let's get at it.

OUR BOARD

It's impossible to do anything of consequence in any field without dedication and collaboration. That's why our board of directors is stacked with some of the most curious minds and committed advocates for innovation that this province has to offer. The NBIF Board is responsible for guiding and overseeing the business and affairs of the organization, which means that we benefit not only from close cooperation, but also from our diverse opinions and experience. Each member was selected from a relevant industry or organization in New Brunswick to provide their own unique perspective on the work that we do. Board diversity in all of its facets is extremely important to us, and we are continuously working to ensure that our board membership appropriately reflects this commitment. We're thrilled to add the brilliant Dr. David MaGee to this dynamic group, and look forward to his future contributions to the NBIF.



BOARD OF DIRECTORS:



CATHY SIMPSON, Chair CEO, TechImpact



ERIC COOK, Vice Chair
Executive Director and CEO, RPC



GERRY VERNER, Secretary
VP Sales and Marketing, Innovatia



ROB MILLER, Treasurer President, Nova Capital Inc.



JILL GREEN
CEO, Green Imaging Technologies



JACQUES PINET President, RDC



JEAN-MARC DUPUIS
Deputy Minister, PETL



LIANE ROY President, CCNB



DR. DAVID MAGEE
Vice President Research,
UNB - NEW MEMBER



OUR TEAM

The NBIF team is our greatest asset - the aspirations of our organization mean nothing without the diligence and competency of the people charged with realizing them. Our team's passion for innovation in this province naturally fosters exceptional work quality and impressive results. This year, we've continued to benefit from an inspiring work environment that allows us to better serve the interests of our clients and the province of New Brunswick. We're thrilled to have welcomed several new team members to the NBIF family this year!

Our team's PASSION FOR INNOVATION

in this province naturally fosters exceptional work quality and impressive results.

EXECUTIVE TEAM:



JOANNE JOHNSON Executive Assistant



RAYMOND FITZPATRICK Director of Investments



THOMAS BIRD*
Investment Analyst



DANIEL HOYLES*
Investment Analyst



NATASHA YOUSSEF*
Investment Analyst



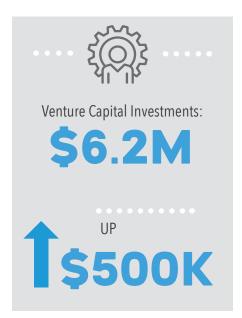
HILARY LENIHAN
Program Support Officer

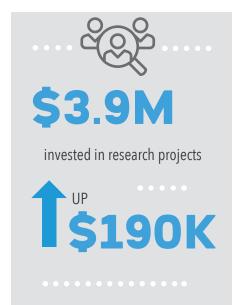


DOMINIQUE SOFFEE*
Marketing and Administrative
Assistant

*New employee

OUR PERFORMANCE





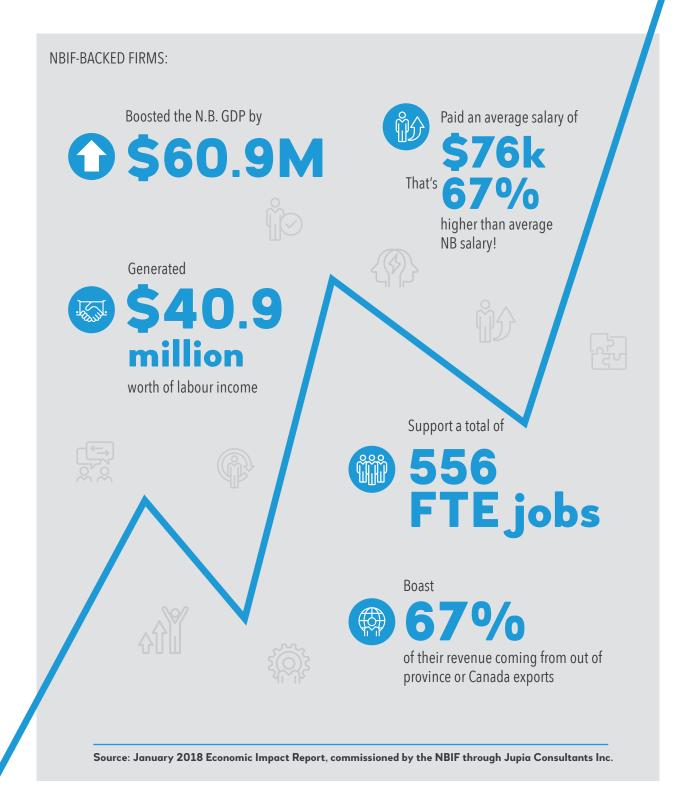
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Innovation Voucher:
\$2.15M
up
\$1.2M

AWARDED FUNDS	2017-2018	2016-2017	SINCE 2003
Applied Research	\$3,876,170	\$3,684,309	\$35,190,496
Startup & growth	\$8,331,942	\$5,659,439	\$39,327,073
Talent & Recruitment	\$2,498,000	\$2,766,000	\$25,324,224
Total NBIF	\$14,706,112	\$12,109,748	\$99,841,793
Leveraged Capital	\$32,577,623	\$51,327,873	\$457,451,613
TOTAL IMPACT	\$47,283,735	\$63,437,621	\$557,293,406

INVESTMENT PERFORMANCE SINCE INCEPTION 2018 (as of March 31, 2018)	
Invested by the NBIF	\$100M
Leveraged capital	\$457M
Active portfolio companies	45
Research projects supported	494
Professors recruited	72
VALUE OF VC EXITS TO DATE	\$12M



OUR IMPACT





RESEARCH

Research can often be an unsung contributor to innovation. But it's critical to recognize that behind nearly every new, innovative product or business is a research question and a dedicated team devoted to solving it. We pride ourselves on facilitating and supporting research in all of its many forms, even fundamental studies that seek only to provide an answer, not necessarily a market-facing function. Great ideas are occurring all over this province, and our singular aim is to help support the tireless work of researchers toiling in labs around New Brunswick.

Behind every new innovative product or business is a RESEARCH QUESTION and a DEDICATED TEAM devoted to solving it.

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R3 INNOVATIONS IN AGING EVENT

This was a transformative year for our research recognition awards. With 2018 marking the event's 10-year anniversary, the NBIF revealed a new three-day format centered around the timely theme of 'innovations in aging'. This year's event was developed out of collaboration between the NBIF, the New Brunswick Social Policy Network (NBSPRN), and the New Brunswick Health Research Foundation (NBHRF).

The R3 mission is to spotlight innovative local research, unite researchers with the public and business community, and demonstrate the tremendous impact research can have on New Brunswick. Our intention with the new format was to reach new and different audience levels - and there's no doubt that the event was a huge success, with over 700 attendees across the three days.

The multi-event initiative kicked-off with the R3 Talks on the evening of April 10th, 2018, at the Fredericton Playhouse. This short series of TED Talk-style presentations was delivered by some of New Brunswick's top researchers in aging fields, and was hosted by award-winning British comedian James Mullinger.

The Talks event was followed by a twoday R3 Conference, held on April 11 and 12, 2018, which consisted of hands-on, workshop-style sessions emphasizing the importance of a collaborative approach between the community, government, industry, and researchers. The conference ended with a workshop facilitated by NouLAB, New Brunswick's social and public innovation lab headquartered in Moncton, which specializes in helping organizations move forward through innovation, tool development and experimentation.

The event wrapped-up with a gala celebration on April 12th, 2018 at the Fredericton Convention Centre. Five research finalists were individually spotlighted, three of whom were chosen for the Research Innovation Awards and granted \$50,000 each in NBIF research funding. One CBC Viewers' Choice Award recipient was also announced and was awarded \$15,000 in NBIF research funding. Entertainment included a powerful keynote delivered by Ashton Applewhite, ageism expert and author of This Chair Rocks.

AWARD RECIPIENTS:

- Dr. Suzanne Dupuis-Blanchard, UdeM, Nursing Homes Without Walls: A Model for Aging in Place
- Dr. Clive Baldwin, STU, Enhancing Well-Being in Later Life through Innovations in Narrative Care
- Dr. Carole Goodine, York Care Centre, Polypharmacy App to Improve Health Outcomes in Older Adults. Dr. Carole Goodine also won Viewers' Choice.





The R3 mission is to **SPOTLIGHT INNOVATIVE** local research.

Guests interact with new technologies.



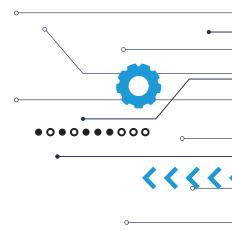
Radio-Canada's Janique Leblanc.



The crowd enjoy the evening's emcees, Harry Forestell and Janique Leblanc.

Over the last decade, the NBIF has been proud to host our highly anticipated biennial R3 Gala event in RECOGNITION OF EXCELLENCE in New Brunswick research. R3 has a distinct mission – to promote awareness of the EXCEPTIONAL WORK undertaken by our New Brunswick research institutions and local community researchers.





A member of the NBIF team with award recipients: Dr. Suzanne Dupuis-Blanchard, Dr. Clive Baldwin, Dr. Carole Goodine.

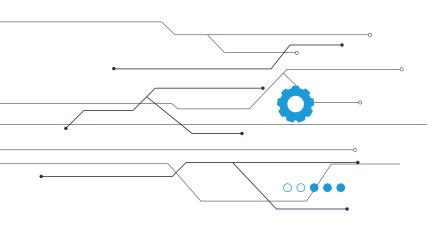
TALENT DEVELOPMENT FUNDING

The NBIF offers Talent Development Funding to New Brunswick Research Institutions in several ways, but primarily through our Startup Award Funding, and the Research Technician (RTI) and Research Assistantship (RAI) Initiatives. Being a biennial competition, the RTI funding program was not held in 2017, but will return in 2018.

STARTUP AWARDS

RECIPIENTS	AMOUNT
Narayanan Srikanth	\$100,000
Mohammed Khennich	\$75,000
Rodrigue Yossa	\$50,000
Elmahdi Driouch	\$50,000
Emily Austen	\$50,000
Kush Bubbar	\$50,000
Marie-Hélène Thibault	\$50,000
Clodualdo Aranas	\$50,000
Veronica Whitford	\$50,000

TOTAL: **\$525,000**





Guillaume Vienneau, Masters student in biochemistry at the Université de Moncton, Shippagan working in the lab with Dr. Marie-Hélène Thibault.

STARTUP AWARD SPOTLIGHT

Dr. Marie-Hélène Thibault

In 2018, Dr. Marie-Hélène Thibault saw the opportunity to work at Université de Moncton, Shippagan campus, and knew she couldn't pass it up. Dr. Thibault is using her Startup Award to focus her research on the development of new materials. Specifically, she's interested in materials that have biomedical applications; materials that can be used, for example, in the human body to replace bones during a bone graft. The funding is a real game-changer for Dr. Thibault and her research. It has allowed

her to set up her research lab, purchase new equipment and chemicals, and assemble a team to aid in her research.

The funding is a **REAL GAME-CHANGER**for Dr. Thibault.



RESEARCH ASSISTANTSHIP INITIATIVE AND NEW BRUNSWICK GRADUATE SCHOLARSHIP PROGRAM

The Research Assistantships Initiative (RAI) is a joint initiative between the NBIF and the New Brunswick Department of Post-Secondary Education, Training and Labor (PETL). It provides applied researchers some of the funding they need to hire undergraduate and graduate student research assistants. Graduates are awarded \$10,000 each,

while undergraduates each receive \$5,000.

Every year, the NBIF also partners with PETL to award scholarships to graduate students in New Brunswick. Scholarships are provided to qualified domestic and international students whose educational focus lies in a STEM field or involves social innovation.

STUDENT FUNDING BY INSTITUTION				
	SCHOLARSHIPS	ASSISTANTSHIPS	AMOUNT	
UNB	126	59	\$1,343,500	
UdeM	52	43	\$562,500	
Mount A	3	4	\$32,000	
NBCC	N/A	3	\$15,000	
IRZC	N/A	3	\$20,000	

SCHOLARSHIPS: 182

ASSISTANTSHIPS: 112

AMOUNT: **\$1,973,000** LEVERAGING: **\$4,407,521**

NB GRADUATE SCHOLARSHIP SPOTLIGHT

Damilare Odumosu

Damilare Odumosu's life is entirely about making a difference. After working with tech companies in his home country of Nigeria, Damilare set his sights on converting his own ideas into innovative solutions that could change the world around him. With the support of an NBIF STEM Scholarship, Damilare enrolled in the UNB's Master of Technology Management & Entrepreneurship program in 2017. He has since launched All Farmers Online, a smart agriculture company striving to improve the productivity of small-holder farmers across Sub-Saharan Africa.

Damilare Odumosu's life is entirely about MAKING A DIFFERENCE.





RESEARCH INNOVATION FUND

Funding under the Research Innovation Fund is disbursed in different components: Innovation Capacity Development and Concept Validation.

CONCEPT VALIDATION		
RECIPIENT	AMOUNT	LEVERAGING
François Chabot	\$40,200	\$80,420
Luc Martin	\$22,400	\$43,000
Martin Filion	\$50,000	\$109,000
Bill McIver	\$10,000	\$20,000
Lauren Beck	\$54,130	\$142,336
Anirban Ghosh	\$175,000	\$325,000
John Johnson & Chris Gray	\$25,000	\$39,000
Yun Zhang	\$85,800	\$200,000
David Joly	\$300,000	\$800,000

AMOUNT: \$762,530

LEVERAGING: **\$1,758,756**



The Research Innovation Fund [RIF] is designed to ADVANCE the province's research capacity to develop innovations that can be commercialized and have an ECONOMIC IMPACT on New Brunswick.

CONCEPT VALIDATION SPOTLIGHT

The Biorefinery Technology Scale-Up Centre

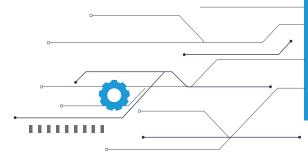
The Biorefinery Technology
Scale-Up Centre (BTSC) at CCNB
Edmundston-Grand Falls began with
a simple question: how can chemists
and researchers help brewers and
distillers create a better product?
Just a few years later, the BTSC
has cemented itself as a crucial
link between science and industry
in New Brunswick and a centre of
bioproduct research and technology
for Atlantic Canada.

By supporting BTSC researchers like chemist Mike Doucette and microbiologist François Chabot, the NBIF is helping the centre explore diverse branches of biotechnology like fermentation processes, biodiesel production, and biogas production from agricultural waste. Although the BTSC is young in years, the scope of what its team of researchers is trying to do is simply phenomenal, and the NBIF is happy to be a part of it.



Biochemist Mike Doucette of CCNB working in the Biorefinery Technology Scale-Up Centre.

INNOVATION RESEARCH CHAIRS



The NBIF remains committed to fostering greater collaboration between the private sector and academia, funding five innovation research chairs across the province. Each of these chairs are exclusively focused on research to help private sector companies develop new and improved products and technology with the aim of developing our research capacity and growing our economy.

The New Brunswick Innovation
Research Chairs help drive increased
COLLABORATION between
ACADEMIC RESEARCHERS AND
THE PRIVATE SECTOR.

That includes aquatic biosciences, advanced wood products, medical technologies and devices, and biosciences.



INNOVATION RESEARCH CHAIR SPOTLIGHT

Dr. Ehab Misk, Ph.D.

The NBIF recently named Ehab Misk Ph.D. as its New Brunswick Innovation Research Chair in Aquatic Biosciences at the Huntsman Marine Science Centre. As the NBIRC, Dr. Misk will focus on aquatic animal health across a number of sectors, provide research and development capacity to conduct controlled laboratory-based challenge experiments, and serve as a focal point to coordinate collaborative partnerships in the field of study with the target industries, research institutions in the province, and elsewhere.

Dr. Ehab Misk's role as
Research Innovation Chair in
Aquatic Biosciences

OF RESEARCH

at the Huntsman Marine
Science Centre.

Dr. Misk will focus on

AQUATIC ANIMAL HEALTH



Dr. Ehab Misk New Brunswick Innovation Research Chair in Aquatic Biosciences

PORTFOLIO OVERVIEW



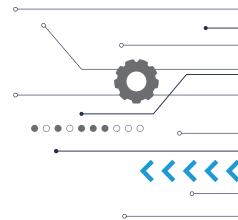
PORTFOLIO 2018 (as of March 31, 2018)	
RtTech Software	\$1,575,000
Populus Global	\$1,321,600
Inversa Systems	\$1,275,381
Gemba	\$1,050,000
Smart Skin Technologies	\$1,001,454
Eigen Innovations	\$1,000,000
Alongside	\$750,000
Mycodev	\$600,000
Resson	\$558,981
ITAVIO	\$517,375
Envenio	\$512,698
Avrij	\$500,000
Encore Interactive	\$500,000
Fiddlehead	\$500,000
SmartPods	\$484,036
WellTrack	\$450,005
Flixel	\$450,000
Simptek Technologies	\$350,000
Fundmetric	\$300,000
HotSpot Merchants	\$250,000
Introhive	\$250,000
Kognitiv Spark	\$250,000
Repable	\$250,000
Scene Sharp	\$250,000

Soricimed	\$250,000
Total Pave	\$250,000
Jaza Energy	\$200,000
Loft1	\$200,000
Patchell Brook	\$200,000
Porpoise	\$200,000
Quber	\$200,000
Select Bidder	\$200,000
Stash Energy	\$200,000
Beauceron Security	\$150,000
EhEye	\$150,000
AVSS	\$100,000
Black Arcs	\$100,000
Chinova Bioworks	\$100,000
Ella	\$100,000
Newpy	\$100,000
Pfera	\$100,000
Rise Home Design	\$100,000
NB Biomatrix	\$50,000
WEnTech Solutions	\$50,000
Legacy Lane	\$25,000

TOTAL: **\$17,971,530**

VENTURE CAPITAL SPOTLIGHT





ProcedureFlow has made big gains since its launch in April 2015. Led by veteran startup dynamo Daniella DeGrace, the company offers an eponymous software-as-a-service (SaaS) product to enterprises that helps employees manage the long, complex procedures that are all-toofamiliar to startups and corporations alike. Just a few short years after its spin-off from industry leader Innovatia, ProcedureFlow has already

doubled both its revenue and its headcount, and they're not finished yet. DeGrace is currently talking to investors in Canada, the United States, and Europe about a seven-figure Series A round of investment to help fuel more rapid growth and position the company for the future. The NBIF took a lead role in ProcedureFlow's seed round and continues to sit on its Board of Directors.



Daniella DeGrace CEO, ProcedureFlow

VENTURE CAPITAL FUND

The NBIF's Venture Capital Fund (VCF) supports development of high risk, growth-oriented companies that are typically at the seed and early stages and require risk capital to grow and succeed.

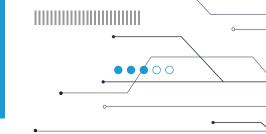


We are dedicated to building INNOVATION in our province.

VENTURE CAPITAL FU	ND
Beauceron Security	\$500,000
Eigen Innovations (1)	\$500,000
Avrij	\$500,000
RtTech	\$500,000
Eigen Innovations (2)	\$400,000
Populus Global	\$350,000
ITAVIO	\$317,375
SimpTek Technologies	\$300,000
Alongside	\$250,000
Smartpods	\$250,000
SomaDetect	\$200,000
Inversa	\$200,000
Gemba	\$300,000
Envenio	\$112,698
Loft1	\$100,000
Repable	\$100,000
Patchell Brook	\$100,000
Kognitiv Spark	\$50,000

TOTAL: \$5,030,073 LEVERAGING: \$13,637,677

PORTFOLIO SPOTLIGHT

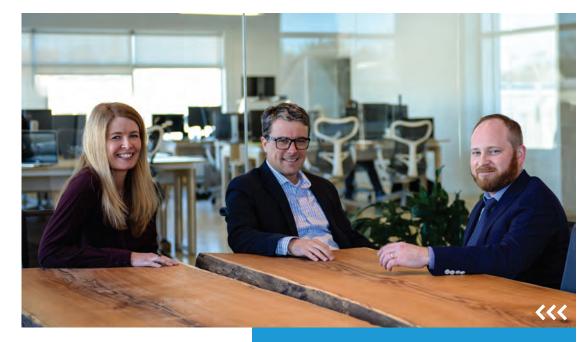




Eigen Innovations

When auto manufacturers look to add the latest bells and whistles to their cars, Eigen is there to help them build smarter. Eigen uses real-time monitoring of injection moulding, plastic manufacturing, and diecasting to identify and fix production problems on a machine-by-machine basis. Its Intellexon software additionally leverages artificial

intelligence and machine learning techniques to help predict and prevent these problems. Developed at the University of New Brunswick, Eigen can be found on the factory floors of some of the biggest automakers in Canada, the United States, and Japan.



From left to right:
Erin Barrett - VP, Business Strategy
Greg Picot - VP, Business Operations
Scott Everett - Co-Founder, CEO

STARTUP INVESTMENT FUND

The Startup Investment Fund (SIF) provides New Brunswick entrepreneurs with the investment capital needed to develop a product, service or technology into a commercially viable venture. Its main objective is to prepare companies for significant future venture capital investments.



STARTUP INVESTMENT FUND			
EyesOver	\$200,000		
Stash Energy	\$200,000		
Quber	\$200,000		
Beauceron Security	\$150,000		
EhEye	\$150,000		
Jaza Energy	\$100,000		
AVSS	\$100,000		
Rise	\$50,000		

TOTAL: **\$1,150,000**LEVERAGING: **\$2,330,600**

We deliver the resources and expertise required to achieve NEW OPPORTUNITIES, GROWTH, and ADVANCEMENTS in New Brunswick.

PORTFOLIO SPOTLIGHT



EyesOver uses artificial intelligence (AI) to discover and analyze relevant online discussions in real time. Unlike traditional social media monitoring platforms, EyesOver doesn't require users to input a wide range of keywords. Instead, using Al to monitor these discussions leads to more streamlined and relevant results. The company was founded by Dr. Ali Ghorbani, as an offshoot of his research while at the University of New Brunswick. EyesOver then grew into a startup, and expanding further after enlisting the help and guidance of now CEO, Craig Leonard. The company continues to see growth, due in large part to EyesOver's unique algorithms that are capable of providing a

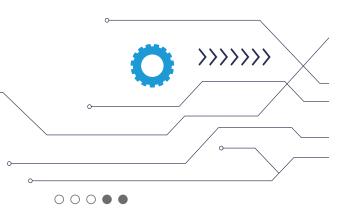


Craig Leonard, CEO EyesOver

complete picture of conversations surrounding a given subject by offering supplementary information to the user in real time.



INNOVATION VOUCHER FUND



The objective of the Innovation Voucher Fund is to spark innovation inside existing businesses, specifically small-to-medium sized enterprises. Through this fund, the NBIF pairs SMEs with New Brunswick Research Institutes to allow them a chance to improve or develop new products, processes, or technologies. The NBIF funds 80% of the project cost up to a maximum of \$80,000.

INNOVATION VOUCHER FUND		
COMPANY	RESEARCH INSTITUTION	AMOUNT
Pathway to Innovation	UdeM	\$80,000
Aqua Diamond Seafood	IRZC	\$80,000
Plixxo Corporation	UNB	\$80,000
Island Fisherman Cooperative Association (ACPI)	IRZC	\$80,000
HSF Foods	RPC	\$80,000
Elumicate	UdeM	\$80,000
GE Barbour	CCNB	\$80,000
RAP Technologies	CCNB	\$80,000
Eigen Innovations	UNB	\$80,000
RAP	CCNB	\$80,000
C-Therm Technologies	UNB	\$80,000
Caissie Logging	RPC	\$80,000
Pêcheries Thibodeau et Fils Ltée	CCNB	\$80,000
Chief Defence Contractors	UNB	\$80,000
Sweat Academy	UdeM	\$80,000
AppDigenous Development Inc.	RPC	\$80,000
Bolero Shellfish Processing	IRZC	\$80,000

Sungro Horticulture	IRZC	\$79,992
Norgen Aquaculture	Huntsman Marine	\$79,920
Quoddy Savour Seafood	Huntsman Marine	\$78,600
Gas Infusion Systems (GIS)	Huntsman Marine	\$79,584
Cardwell Farms	CCNB	\$79,460
Jiffy Products	IRZC	\$67,478
RP Pro-Fibre Ltée	CCNB	\$43,792
Services Hall Ltée	CCNB	\$40,800
Construction Navale Atlantique	CCNB	\$40,800
Power Precision	CCNB	\$39,200
AGB Products and Welding	CCNB	\$28,000
Thermopak	UdeM	\$25,204
Boreal Spirits	CCNB	\$24,518
J'Miralco	CCNB	\$16,000
Dynamic Truck Bodies	CCNB	\$15,040
Night Puck Technologies	RPC	\$13,200
Forestry Coop North-West	CCNB	\$12,149
ThermalWood	CCNB	\$12,000
Strang's Produce	CCNB	\$8,132
BKE Foods	CCNB	\$8,000



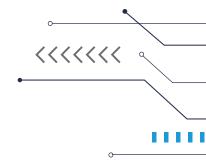
TOTAL: **\$2,151,869**LEVERAGING: **\$548,508**

The objective of the Innovation
Voucher Fund is to

SPARK INNOVATION

inside existing businesses, specifically small-to-medium sized enterprises.

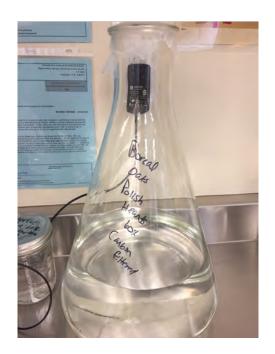
INNOVATION VOUCHER FUND SPOTLIGHT





Boreal Spirits

Jossilynn Flewelling is the owner of Boreal Spirits, one of New Brunswick's newest distilleries. She teamed up with CCNB to develop a vodka recipe that was wholly unique to her company. Gaining access to the talent, expertise, and equipment at CCNB saved Jossilynn years of trial and error trying to perfect the formulation – one she plans to bring to market in early 2019.





Boreal Spirits Recipe testing at CCNB labs in Edmundston.