INNO

21 / 22

ANNUAL REPORT

OUR MISSION

BRING TO LIFE INNOVATIONS THAT ENABLE THE INDUSTRY FROM ALL OVER THE COUNTRY TO BE MORE PRODUCTIVE AND COMPETITIVE.

OUR VISION

ESTABLISH OURSELVES, THROUGH LIGHT, AS A WORLD-CLASS REFERENCE IN TRANSLATIONAL INNOVATION.

OUR VALUES

LISTEN, UNDERSTAND, AND COMMIT.

INO's activities are made possible through ongoing cooperation with our partners:

Développement économique Canada pour les régions du Québec
Canada Economic Development for Quebec Regions
Québec

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MESSAGE FROM THE CHAIR OF THE BOARD

"INO is more determined than ever to harness the potential of technology and be a driver of socioeconomic development in Québec and across Canada."

PIVOTING THROUGH THE PURSUIT OF EXCELLENCE

The second year of the pandemic brought new challenges for Canadian businesses, including spiralling inflation, the ongoing labour shortage, and the urgent need for climate change action. Add in the pressure to keep production costs down to stay internationally competitive and it's no wonder so many companies are feeling disheartened by the current business landscape. Except INO—we find it tremendously motivating!

To navigate the energy and demographic transition, Canadian entrepreneurs need to innovate, automate, and orchestrate their digital transformation in ways that prioritize both the environment and economic prosperity. INO continued to be a value creator this year, delivering solutions that had a timely and tangible impact on Canada's gross domestic product.

After some exciting changes and another stellar year, we are more determined than ever to harness the potential of technology and be a driver of socioeconomic development in Québec and across Canada. We kept our R&D going at full tilt this year and also revamped our membership formula to better align with industry. Representatives from different sectors will now sit on four new advisory committees created to focus our efforts on market needs. Member companies will also have access to a collaborative model for investing in innovative projects with strong potential for players across the same sector.

DYNAMIC, INCLUSIVE, REPRESENTATIVE GOVERNANCE

The board of directors also took the opportunity this year to revisit the structure and responsibilities of the Governance and Human Capital, Audit, Innovation, and Major Proposals committees. As a reflection of our conviction that the workplace should be a dynamic and constantly evolving environment, both professionally and personally, the board also created a new department: Human Experience and Culture. It is headed by Karine Romain, INO's first-ever female vice-president.

But we didn't stop there. This year the board also added new directors from diverse backgrounds, all without tipping the gender balance achieved in 2019. We welcomed Caroline Boudoux, entrepreneur, full professor at Polytechnique Montréal, and researcher at the Research Centre of Sainte-Justine University Hospital, as well as Sébastien Proulx, lawyer and strategic advisor in public law and government relations at GBV Lawyers. We also saw the departure of Paule De Blois, recently appointed Québec's Deputy Minister of Higher Education, and two longtimers: Guy Laberge, member since 2006, and Jean-Guy Paquet, member since 1994. Jean-Guy Paquet was an early advocate for INO's creation and subsequently held positions as the institute's president and CEO, chair of the board, and director. He was also instrumental in helping INO become Canada's leading centre for industrial innovation in optics and photonics. Thank you all for everything you've done over the years!

EMPOWERING YOUNG ENTREPRENEURS

The Quantino incubator, which officially launched in October 2020, continues to grow and galvanize the organization. This year's highlights include a collaboration with the Québec Heart and Lung Institute Research Centre for incubating medical startups. The goal is to ramp up development in Québec of solutions to prevent, diagnose, and treat cardiovascular and respiratory diseases (including COVID-19 and other emerging viruses), as well as type 2 diabetes and obesity.

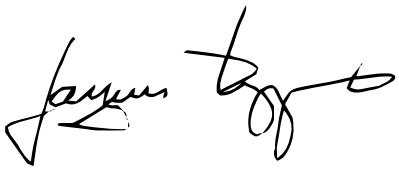
Interest in Quantino is high from startups looking for the best tools to accelerate their takeoff. The selection committee accepted its 15th incubatee in a call for applications that closed March 2022.

REAPPOINTMENT OF THE CEO

In February, the board of directors agreed to reappoint Alain Chandonnet, INO President and CEO since August 2017. Under his leadership, the organization is generating new innovation-driven initiatives that boost the country's GDP by nearly $500 million annually—a leverage effect of more than 20:1 on the government funding INO receives.

WE COULDN'T HAVE DONE IT WITHOUT YOU

We owe our success over the past year to our creative, resourceful team of professionals who fully embody INO's mission. On behalf of the board of directors, I'd like to extend my sincere thanks to everyone at INO for their unwavering commitment to delivering innovations that allow businesses across the country to be more productive and competitive.



Jacques Topping, FCPA, FCA, MBA, ASC
Chair of the Board of Directors

MESSAGE FROM THE PRESIDENT AND CEO

“Choosing INO is a guarantee that your innovation journey will be well defined, structured, transparent, and a source of real value. Because nothing about innovation should be left to chance”

AFTER THE WAVE, IT’S FULL SPEED AHEAD

Like the waves of the pandemic, the past two years have had ups and downs. Although 2021–2022 kicked off with a COVID surge, INO still closed the year with a record number of orders, putting us in an enviable position for 2022–2023. Here’s a look back at the highlights of the last fiscal year.

You may remember that INO closed 2019–2020 with record external revenue. The skies were clear, the winds were favourable…and then the pandemic struck in early 2020–2021. Still, we managed to keep going strong through the first two waves of the pandemic in terms of financial results, technology development, and value creation.

And this past year was no different. But in terms of orders, 2021–2022 was a year in two parts. It wasn’t until the third quarter that we truly began reaping the rewards of the economic recovery. In the end, orders and contracts exceeded $20 million—a 20-year high! As of April 2022, we are still clearing the backlog from late last year, and we expect this significant increase in orders to translate to a substantial gain in revenue for 2022–2023.

The quieter spring and summer that led up to the boom in business in the second half of the year tempered our financial results, although we still reported a slight excess of revenues over expenses of $537,225 for 2021. The key was closely monitoring our expenses and putting off some hires planned for earlier in the year. In a tough economy, when many companies have understandably been cutting back on R&D investments to focus on day-to-day operations, that was a major achievement. And with the federal and provincial funding agreements renewed for five years as of April 1, 2021, we are on solid financial ground and have the means to achieve our goals moving forward.

A BOOMING JOB MARKET

The pandemic created turbulence in the job market and INO certainly felt the effects. But the “new normal” spurred us to double down on our human resources efforts. The newly created Department of Human Experience and Culture recruited 44 regular employees and 16 students this year, in addition to implementing a telework policy and tackling other vital issues that will shape the future of the organization.

CREATING VALUE IN EVERYTHING WE DO

From an administrative point of view and as part of INO's pivot strategy, the management team introduced "value stream" management to include workflows that will generate the most benefits for us, our customers, and our partners. The aim is continuous improvement in:

- Employee experience
- Customer experience
- Project delivery
- Technology asset and infrastructure management

In this modern, cross-organizational management approach, benefits are assessed through the eyes of all stakeholders to break down silos, foster collaboration, and strengthen the culture conducive to value creation so fundamental to INO's pivotal role in the innovation chain.

INVESTMENTS IN INFRASTRUCTURE

On June 3, 2021, the Government of Québec publicly announced a $20 million investment in INO, which will go toward building upgrades and new equipment. This strategic move by the government will generate direct, timely, tangible benefits for Québec businesses, workers, and communities. Upgrading our infrastructure will give us the bright, modular, state-of-the-art facilities needed to:

- Create hybrid spaces where teams can come together and work remotely
- Bring in partners more often and more easily
- Foster a collaborative mindset

After selecting a shortlist of suppliers through multiple calls for tender, an extensive requirement-gathering process was carried out to design a workplace reflective of a world-class leader in innovation translation. With these upgrades, INO will be able to deliver even more social and economic value through technological development.

OUR SINCERE THANKS—AND A PROMISE

At INO, we have been fortunate to feel the effects of the post-pandemic recovery this year. As a centre for industrial innovation, we will do our part to accelerate the upswing across virtually every sector of the economy. The collective role we play as INO employees comes with very high expectations. I want to thank everyone on the team for developing solutions year after year that solidify our position and benefit so many Canadian businesses.

And, in closing, to the industries we so gladly support, we promise to do everything we can to ensure your innovation journey is well defined, structured, transparent, and a source of real value. Because nothing about innovation should be left to chance.

Alain Chandonnet, Ph.D.
President and CEO

INO AT A GLANCE

Since opening our doors in 1988, INO is now the largest centre of applied expertise in optics-photonics in Canada.

20 PATENTS AWARDED
TO INO IN 2021-2022

- 220 EMPLOYEES
- MORE THAN 180 CLIENTS
- 76 TECHNOLOGY TRANSFERS
- 35 SPIN-OFF COMPANIES

5 BUSINESS UNITS

BIOMEDTECH

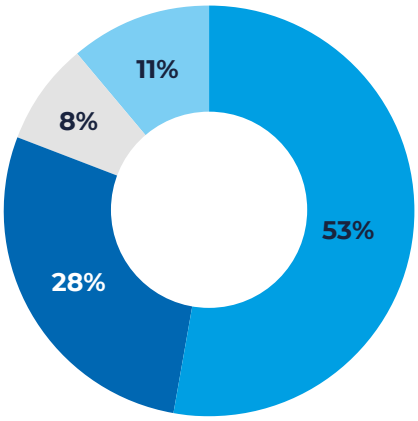
DEFENCE, SECURITY AND AEROSPACE

SUSTAINABLE RESOURCES, AGRICULTURE AND INFRASTRUCTURE

ADVANCED MANUFACTURING

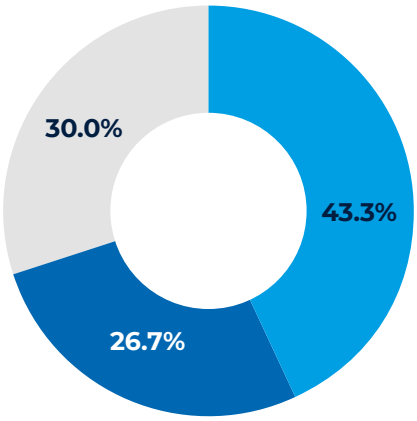
INDUSTRIAL SOLUTIONS

CLIENT BREAKDOWN BY COUNTRY/CONTINENT ($)



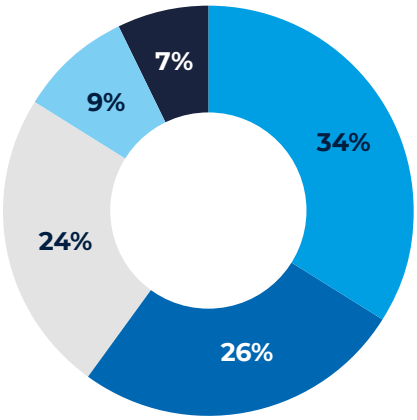
- Canada
- United States
- Asia
- Europe

DISTRIBUTION OF OPERATING REVENUES



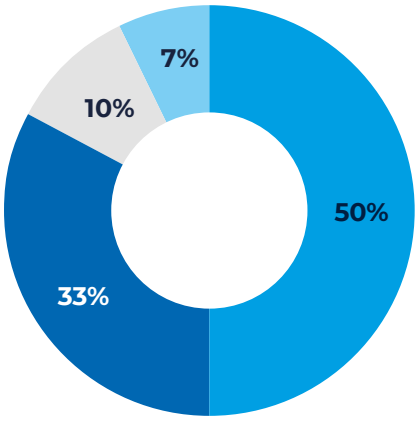
- External Revenues
- In-house Research Program – Québec
- In-house Research Program - Canada

DISTRIBUTION OF REVENUES BY BUSINESS UNIT



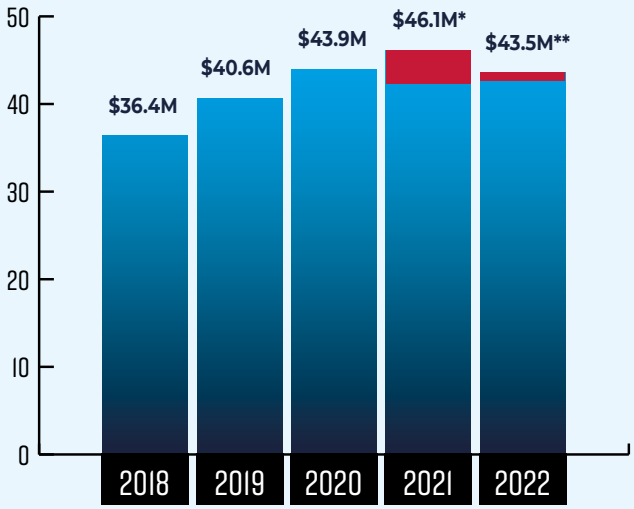
- Defence, security and aerospace
- Biomedtech
- Industrial solutions
- Advanced manufacturing
- Sustainable resources, agriculture and infrastructure

DISTRIBUTION OF REVENUES BY CLIENT CATEGORY



- SME
- Big business
- Government
- University

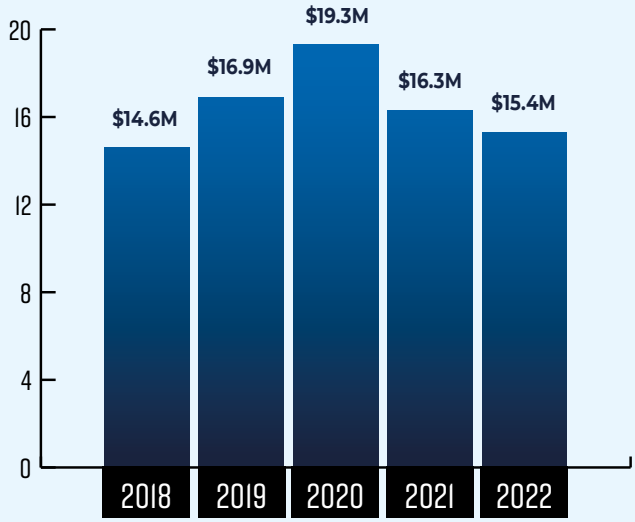
CHANGES IN TOTAL EARNINGS



* Includes $3.8M of CEWS in 2020-2021

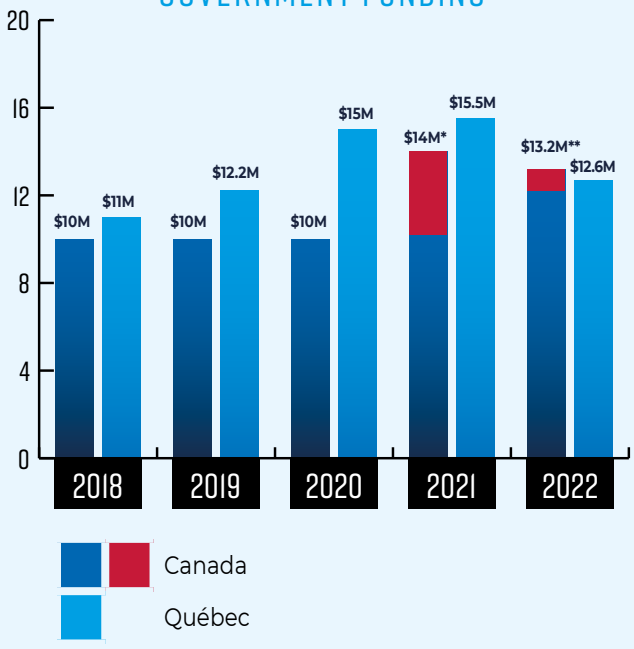
** Includes $1.0M of CEWS in 2021-2022

CHANGES IN EXTERNAL REVENUES*



* R&D contracts, sales, transfer considerations, royalties, dividends

CHANGES IN GOVERNMENT FUNDING



* Includes $3.8M of CEWS in 2020-2021

** Includes $1.0M of CEWS in 2021-2022

Jean-Guy Paquet

A BOLD INNOVATOR RETIRES

At INO's 36th Annual General Meeting on September 23, 2021, Jean-Guy Paquet officially retired from the board of directors on which he served for 27 years. In the early 1980s, when he was rector of Université Laval, he envisioned a centre for optical innovation and galvanized the entire region leading up to the organization's founding in 1988. After a stint at the helm of La Laurentienne Vie, he turned his attention to INO, where he subsequently served as president and CEO until 2005, chair of the board until 2017, and director until September 2021.

He was a driving force in helping transform Québec City's regional economy and made powerful statements over the years that still resonate today:

"We could make the Québec City area the largest centre for optical research and development in Canada and the backbone of a true digital transformation that will ensure our future."

- Speech to the Québec City Chamber of Commerce, 1983

"People were saying: Paquet's living in a dream world with his talk about photonics! But my researchers gave me the tools."

- La Presse, 1998

"Fibre optics will become a utility, just as drinking water and electricity are now."

- Plan, the journal of *Ordre des ingénieurs du Québec*, 1998

"What I'm most proud of is the entire INO team, especially the scientists who made our name and who do the same for Université Laval, since most of them are ULaval graduates. When I was rector, I didn't realize the Physics Department was turning out such great researchers. Now that I'm at INO, I realize how truly talented they are."

- Le Soleil, 2003

"It showed we could do things in Québec City other than civil service."

- Le Soleil, 2008

Key political and business leaders recognized Jean-Guy's invaluable contributions to INO's growth and development at the September 23, 2021 Annual General Meeting:

"I'd like to applaud you for setting the example for Université Laval's students and the public at large, for your friendship, and for your leadership in multiple fields in Québec City and beyond."

- The Honourable Brian Mulroney, former Prime Minister of Canada

"You have helped our prosperity and our collective pride as Quebecers grow. Thank you, Jean-Guy, for your exceptional dedication to the Québec nation."

- François Legault, Premier of Québec

"I want to commend you for having the vision to take university knowledge and transfer it to the community to grow businesses with an impact beyond Québec and Canada."

- Philippe Couillard, former Premier of Québec

"When you think about innovation in Québec City, there's one name that comes to mind: Jean-Guy Paquet. You will always be an inspiring role model for our young people and those who come after us."

- Geneviève Guilbault, Deputy Premier, Minister of Public Security and Minister Responsible for the Capitale-Nationale Region

"You know, Jean-Guy, you represent what INO stands for and you are one of the architects who imagined the High Tech Park and who understood, like visionaries, what was coming to the business world: technological innovation."

- Régis Labeaume, former Mayor of Quebec City

"In addition to being a kindhearted and selfless man, you have been an inspiration throughout your career. Quebec City is now a leader in optics and photonics, a promising niche that has contributed to the economic growth of our region."

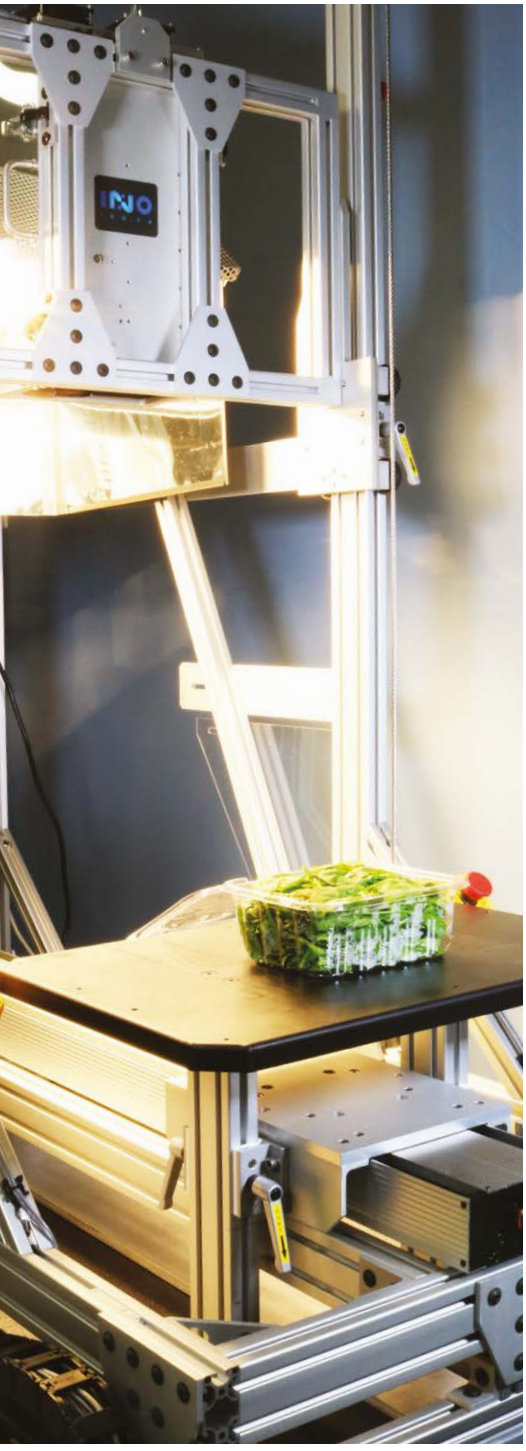
- Sophie D'Amours, Rector Université Laval

"The city has been completely transformed over the past 30 years thanks to you. New companies have taken shape, jobs have been created, and lives have been changed, including mine."

- Éric Bergeron, CEO and Founder Flyscan

Jean-Guy Paquet, thank you for everything you've done for us!

THE YEAR IN TECH



Innovation isn't a matter of luck. That's why INO positions itself as a driving force for economic development, offering a targeted, well structured, transparent, and value-driven approach to innovation. The idea is to allow companies to develop and commercialize applications for photonics technologies without needing highly specialized expertise.

To that end, this year INO:

- Rolled out an innovation project management process based on systems engineering best practices
- Required an industrialization report at every technology readiness level (TRL) meeting
- Created a project management office under senior management to better support INO customers
- Moved the procurement management office under Operations to maximize synergies between technology development and solution industrialization—the ultimate goal with innovation

Harnessing innovation also requires a capacity for industrialization, i.e., turning a prototype or laboratory process into a finished product that is effective, reliable, and industrially and economically viable. This step is typically the weakest link in the innovation chain. It's a mistake to assume that industrializing a solution to bring it to market is only a matter of good engineering right before launch and something most companies have firmly in hand. In manufacturing specifically, access to contract manufacturers is typically only possible for very high-volume productions. That makes it a risky option for SMEs whose applications often involve high performance but low volumes. Which is why INO is there to support customers through production scale-up. Multiple product lines can be profitable on a small, shared chain like the one implemented by INO. And having full control over these processes makes it easier to switch to higher-volume manufacturers when the time comes.

Finally, the constant challenge all innovative organizations face is developing critical capacity to better align solutions with market needs. INO's future growth hinges on active member engagement through new sectoral advisory committees (one per business unit) comprising institutional and industry representatives from our strategic and corporate membership.

Advisory committee members will be briefed on the strategic orientations, solution roadmaps, and technological results for the business unit they're embedded in. They will then have an opportunity to weigh in and contribute to the organization's technological development.

"Harnessing innovation requires a capacity for industrialization, i.e., turning a prototype or laboratory process into a finished product that is effective, reliable, and industrially and economically viable."

Here are some concrete results from INO's efforts to industrialize its technological assets in 2021–2022.

CHALLENGE: MANUFACTURING COST AND PERFORMANCE OF BOLOMETRIC IMAGERS

Solution: Introduced frequency-selective absorber (FSA) technology for THz waves, bringing down the cost of manufacturing the detectors and also packaging them—the lion's share of the cost of producing a bolometric sensor. Unlike gold black deposition, FSA technology is integrated with other photolithography processes, which also improves performance.

Our enhanced short-run sensor manufacturing capabilities bridge the gap between academia and commercial foundries, allowing INO to scale up innovative new solutions based on THz imaging.

CHALLENGE: DEMONSTRATING PERFORMANCE IN REAL-LIFE SCENARIOS, INCLUDING UNCONTROLLED ENVIRONMENTS

Solution: Field tested the Agrovision platform in fall 2021 at Jardins Cousineau, Canada's largest broccoli producer. The lighting and camera system relies on artificial intelligence to guide robotic broccoli harvesters, day or night.

Solution: Carried out extensive testing of the GEN1 Aeromap lidar in a port environment in partnership with SNC Lavalin in fall 2021. Lidar quantifies fugitive dust generated by bulk handling in real time and provides a diagnostic of emissions and their causes and sources.

CHALLENGE: FACTORY-FLOOR TESTING

Solution: Demonstrated the capabilities of INO's dynamic thermography imaging technology for automated leak detection on intravenous solution bags through overpacks, even opaque ones. INO modified its existing test bench to be portable for use on the factory floor to build a set of ground truth annotated images to train the artificial intelligence–based leak detection algorithm.

"Turning a prototype into an end product is typically the weakest link in the innovation chain. Which is why INO is there to support customers through production scale-up."

CHALLENGE: ELIMINATING DETRIMENTAL EFFECTS IN HIGH-POWER (MULTI-KW) LASERS

Solution: Introduced a phase modulation strategy that increases the threshold for stimulated Brillouin scattering and mitigates the adverse effects it causes in the development of ultra-high-power industrial fibre lasers. This technique produced up to 2.4 kW of output power from a single laser transmitter, while preserving the laser's linewidth and beam quality. That's an increase of nearly 400 W over last year's output using the stimulated Brillouin scattering mitigation strategy.

CHALLENGE: SOLUTIONS THAT MEET THE NEEDS OF INDUSTRY 4.0

Solution: Delivered the INOCloud and IA Clever cloud applications. The cloud site and Clever component were used to collect and annotate robotic broccoli harvesting data and to provide cloud support for the production of artificial intelligence models.

Solution: Delivered the INOCloud video recording and streaming functionality for efficient collection and processing of images and ground truth data.

These two advances will eventually benefit all of the above solutions.

CHALLENGE: IMPROVING THE WAY WE BRING INDUSTRIALIZED SOLUTIONS TO MARKET

Solution: Increased the visibility and brand positioning of the QuickPOZ line of self-positioning optomechanical mounts by producing a white paper, videos, and catalogues. QuickPOZ draws on 25 years of experience in building highly resistant mounts for use in harsh operating conditions. Mechanical stability and rapid assembly are guaranteed!

SUCCESS STORIES

Once again this year, the INO team developed an impressive number of solutions that spark imagination, help businesses thrive, stimulate the economy and, above all, change lives.

These innovations generate direct, timely, and tangible benefits for Canadian entrepreneurs and workers through a targeted, transparent, and value-driven approach.

FLYSCAN

DETECTING LEAKS BEFORE DAMAGE IS DONE

Pipeline transportation is widely recognized as the safest way to move hydrocarbons to refineries or storage facilities for distribution to local and foreign markets. But to ensure the safety of the systems and the environment, operators must still carry out regular visual inspections or use cameras to scan pipelines from the inside. But what if technology could take over this mission-critical task—and do it better?

In a project conducted for the U.S. Department of Transportation in 2014, INO experts explored different approaches to the early detection of leaks from underground pipelines. It turned out that a lidar, a laser transmitter in the ultraviolet spectrum coupled with an ultra-sensitive detector, could effectively detect the presence of benzene, a hydrocarbon.

Inspired by the discovery, INO welcomed an entrepreneur in residence, Éric Bergeron, who quickly recognized the technology's potential and founded Flyscan. Together, INO and Flyscan perfected the solution and confirmed that it could detect a puddle of oil of about 1 m^2 at a distance of 150 m. The lidar was officially transferred to Flyscan in December 2020 to be attached to a Cessna aircraft. It now detects leaks from the air long before they could be observed by traditional methods.

And Flyscan continues to soar. The company's investors include Enbridge, a recognized market leader and early technology adopter that operates the world's longest crude oil and liquids pipeline system. Flyscan has also partnered with German company Adlares, which has similar expertise in detecting natural gas leaks.

WANT TO GO BIG? GET SMALL

Benzene detection could have applications in other settings, like fertilizer and chemical plants. A compact unit based on the solution developed by INO would be of great value in protecting the quality of the air breathed by many workers. A miniaturized second version of the benzene detector is in the planning stages so it can be attached to drones, which will greatly reduce operating costs and help Flyscan deploy the technology on a larger scale.

"INO was instrumental in launching Flyscan, which today offers the most effective solution to ensure the safety of the North American pipeline system."

— ***Éric Bergeron***, *Founder and CEO*
Flyscan

TERASAFE

SECURITY WITHOUT COMPROMISE

Ensuring security in public places has become a critical issue in recent decades, particularly since the events of September 11, 2001. But manual pat-down screening is intrusive and unpleasant for travellers, onlookers, and security personnel alike, making it a less than ideal solution.

This prompted INO professionals to develop a solution using terahertz waves, offering contactless search while ensuring the safety of travellers and crowds. After mastering the technology and developing an application to inspect the contents of suspicious packages, INO integrated it into a portable system that can see through clothing to detect a threat without invading people's physical space or privacy. The easy-to-operate device uses submillimetre waves that penetrate clothing and materials in real time without revealing the human silhouette. It can target a potential threat concealed under multiple layers of fabric without resorting to a traditional body search.

Removing direct physical contact makes for a more pleasant experience in many different settings. Terasafe technology has the potential to revolutionize the screening process at airports and stadiums, making it safer and more comfortable for everyone involved.

A VERSATILE SOLUTION

The technology has potential in a range of applications—one being non-destructive inspection in the manufacturing industry, where Terasafe could be used to target manufacturing defects in products through their packaging.

"You can't hide anything from terahertz waves!"

***- Patrice Topart**, Business Unit Manager INO*

CERUS CORPORATION

WORKING TOGETHER TO SAFEGUARD THE GLOBAL BLOOD SUPPLY

For decades, donated blood products have saved lives. But the practice has not been without its challenges, particularly in the 1980s, when thousands of Canadian hemophilia patients and transfusion recipients contracted HIV or hepatitis C after a blood transfusion. Fortunately, standards have evolved, and blood products must now be tested or pathogen inactivated to ensure their safety.

California-based Cerus Corporation, a major innovator in the field of blood safety, offers a variety of solutions to inactivate pathogens in blood components. As Cerus considered how to maintain its leadership for the future, it sought state-of-the-art technology and expertise and chose INO to help develop its next generation of products.

Cerus's flagship system includes an illumination device which uses mercury lamps. These lamps are no longer manufactured so Cerus needed to find a partner to help develop an LED-based system with the specific wavelength needed to inactivate pathogens in blood product bags. Cerus first came in contact with INO at SPIE BiOS in 2018. A few weeks later, INO was invited to respond to a request for proposals, submitting a dossier that stood out among the more than 30 potential suppliers.

A BRILLIANT PRODUCT!

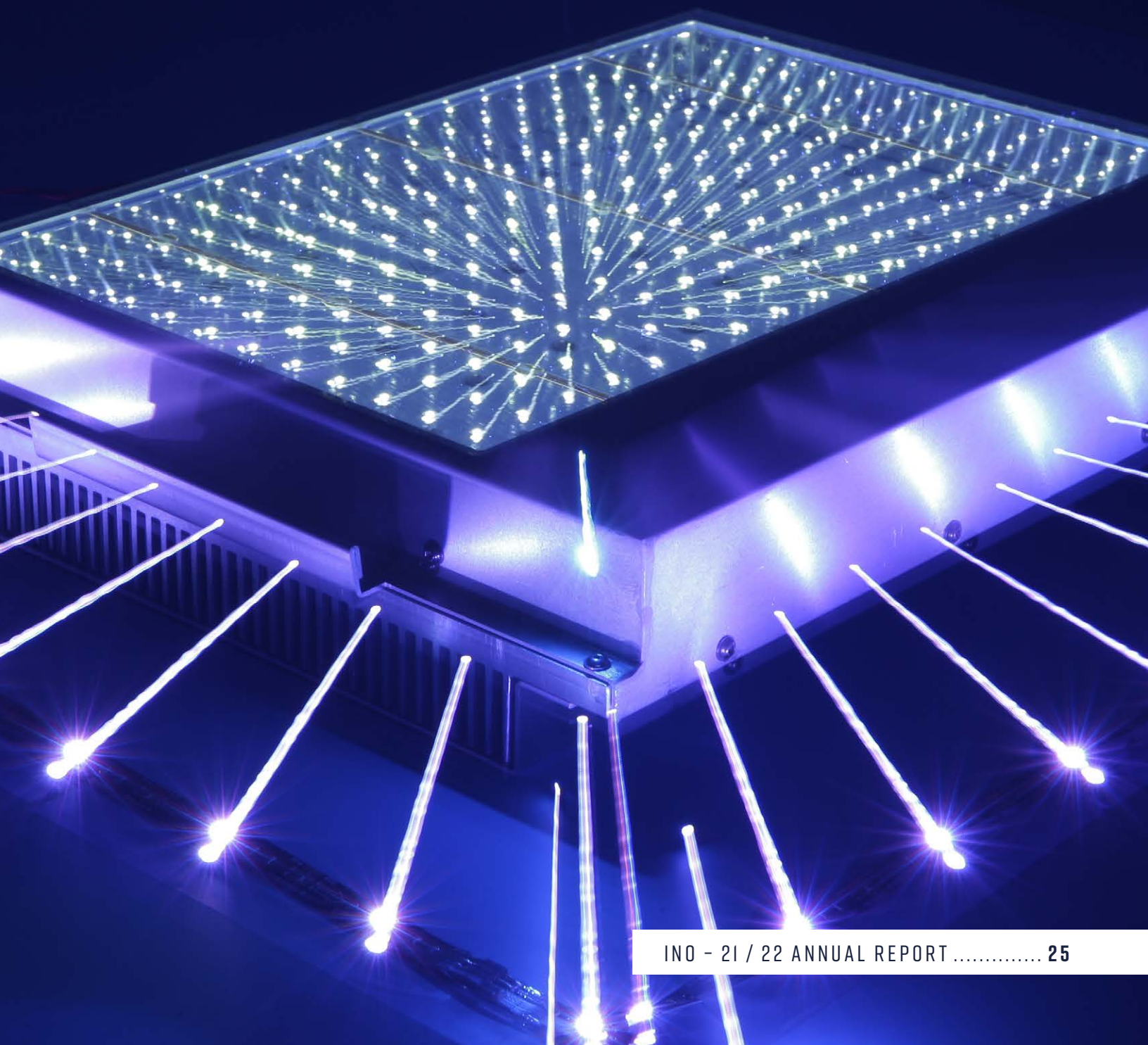
INO developed a smart LED system that provides uniform lighting and offers different control options, including intensity and exposure time. The device is also equipped with detectors that provide real-time data ensuring that each blood product is getting the right dose of light and the entire process is flawless. For example, if an LED is defective, the user will be notified immediately.

MORE COLLABORATION IN THE WORKS

The development has been a success and is now in the process of being transferred to a Cerus subcontractor for production. But the partnership isn't ending there! In April 2022, the U.S. company was in Québec City to initiate a new project with INO. Yet another "luminous" achievement for INO!

Our ongoing business relationship with INO is the ultimate proof of how satisfied we are with what they deliver!

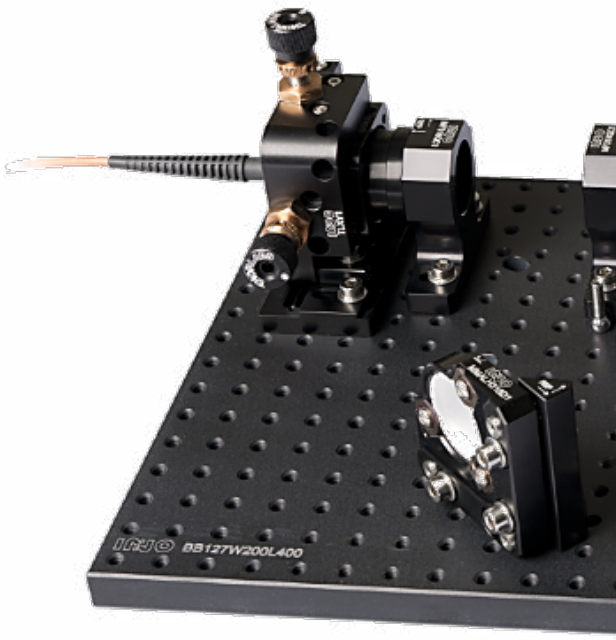
*- **Lloyd Ison**, VP Device Engineering, Hardware and Software*
Cerus Corporation



QUICKPOZ

A LINE OF SELF-POSITIONING OPTOMECHANICAL MOUNTS

Fast assembly and precise alignment are essential to the development and proper functioning of any optical product. With over 25 years of experience creating solutions for use in hostile environments, including aerospace, military, and industrial applications, INO now sells the components of its QuickPOZ line of optomechanical mounts by the piece directly to customers and partners.



QuickPOZ draws on the engineering prowess and expertise in removable alignment mechanisms developed at INO since 1996 and on advancements in auto-centring technology made since 2012. By standardizing our mounts within one product line, INO fills a void in the market. Other products have been useful in laboratory testing but not suitable for integration into prototypes or end products—just one of the things that sets QuickPOZ apart.

NOT YOUR AVERAGE MOUNTS

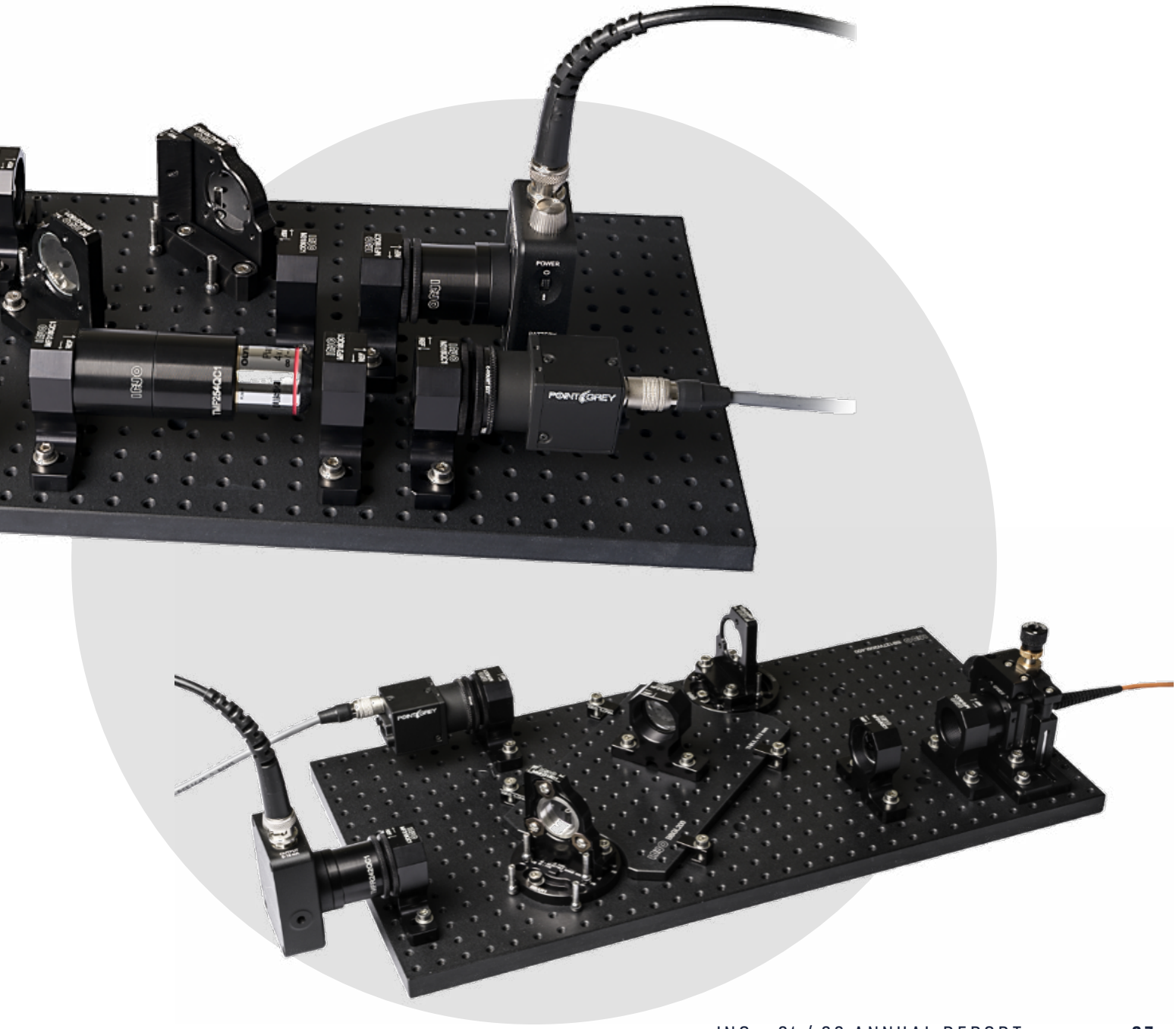
This new line of over 150 precision machined mounts, accessories, and threaded breadboards offers a way to assemble prototypes that remain aligned even in the harshest environments. Each mount or optical component can be placed precisely with high position repeatability using removable reference balls and auto-centring technology. QuickPOZ mounts are cost-effective, vibration resistant, and designed with parts offering extremely tight manufacturing tolerances. They can be used to build lasers, lidars, spectrometers, quantum systems, biophotonic products, and other high-tech devices.

KNOWLEDGE TRANSFER—AND MAYBE A SPINOFF

Constant improvements are being made to the QuickPOZ line, which companies have already shown interest in bringing to market. We can expect to see a technology transfer to a partner or even the creation of an INO spinoff in the next few years, allowing us to create even more value and help Canadian companies better position themselves on the global innovation landscape.

"One of our customers describes QuickPOZ mounts as being absolutely rock solid."

*- **Nichola Desnoyers**, Technology Manager*
INO



EIKON THERAPEUTICS

REVOLUTIONIZING DRUG DISCOVERY, ONE MOLECULE AT A TIME

Advances in biomedicine are now more critical than ever because they help us better understand, prevent, and cure various health problems. The importance of this quest for knowledge is reflected in the research being conducted to develop new and potentially life-altering drugs. However, the urgent need to develop treatments could be better served by more effective targeting methods. Targeting is a very meticulous process that often requires massive investments of time and money.

Eikon Therapeutics is implementing innovative technologies to analyze how proteins in living cells behave and interact. The goal? Understanding the effects of compounds on target proteins in living cells in order to create medicines that improve and extend life. With this in mind, Eikon turned to INO for its expertise in precision optomechanics.

INO was tasked with developing the three-beam laser illumination module needed for the solution Eikon Therapeutics had in mind. Since the summer of 2021, INO has been collaborating with Eikon Therapeutics to develop this revolutionary device, conducting modelling, development, and testing in environmental chambers to make sure the solution is sufficiently robust and powerful for real-world applications.

THE INO ADVANTAGE

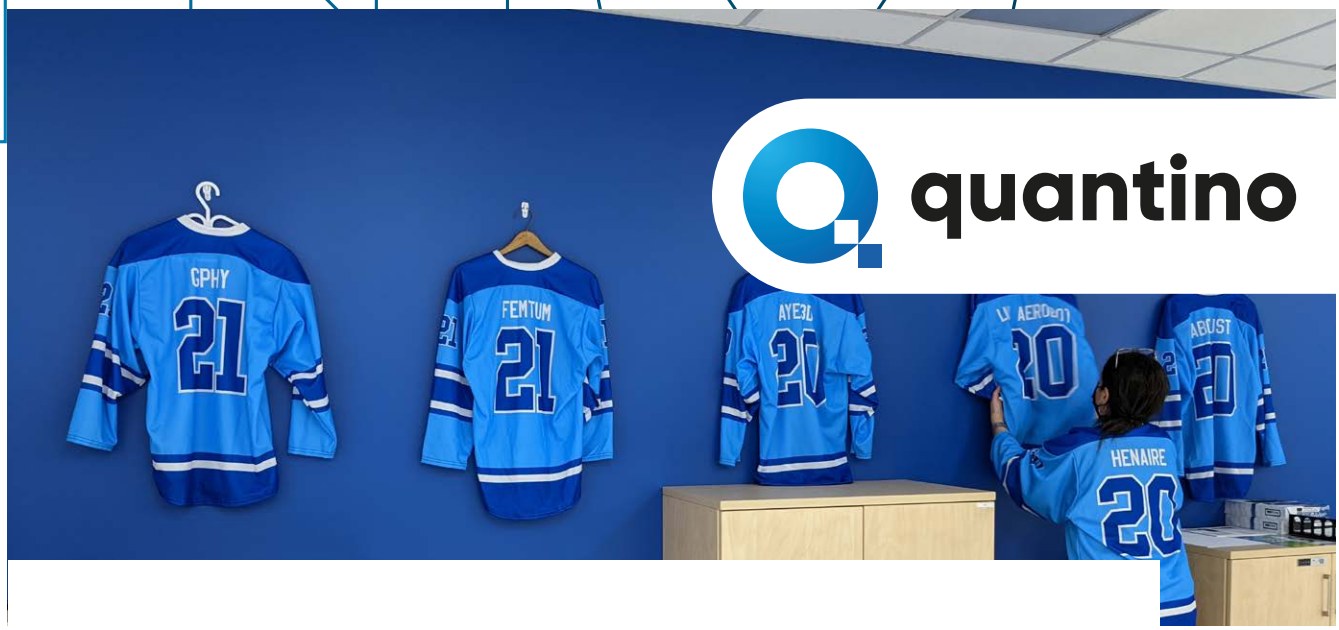
For Eikon Therapeutics, a key advantage of developing its solution with INO is its ability to create the custom mounts used in the project. Inspired by the QuickPOZ series, these robust mounts allow for precise positioning of lasers, lenses, and mirrors so they withstand transport and deliver the expected performance in real-world operating conditions.

ENCOURAGING THE LOCAL ECONOMY

Working with INO also means taking advantage of all the expertise the Québec and Canadian innovation ecosystems have to offer. Some 80% of the solution's parts, including the optical subsystem components, come from Canadian suppliers.

"Working with INO will help us accelerate our work to discover new biology and important medicines for patients!"

– ***Fedor (Teo) Ilkov,*** *Director, Optical Engineering*
Eikon Therapeutics



ENHANCED SERVICES, BROADER APPEAL

Quantino's first full year went at breakneck speed. Not only did the incubator grow from three to nine startups and accept six more at the end of the fiscal year, but its incubatee profile has diversified considerably thanks to collaborative agreements with the Québec Heart and Lung Institute Research Centre and the CERVO Brain Research Centre. Quantino is now able to provide turnkey incubation services to medical startups developing solutions to prevent, diagnose, and treat cardiovascular and respiratory diseases, type 2 diabetes, obesity, and psychiatric and nervous system disorders. These strategic partnerships will foster the growth of local value creators that are developing promising innovations and revolutionary technological products in the field of medicine.

Also on the partnership side, Quantino is proud to expand its consulting services as part of an ongoing effort to enhance the services we provide. New experts in residence from KPMG, EY, and Tact are now available to provide incubatees tax, audit, and public relations guidance.

Clearly, joining Quantino has immediate advantages for any high-tech startup. For instance, for only $3,600 a year, a spot in the shared workspace delivers nearly $160,000 in equipment, technical services, consulting services, specialized software, and other benefits.

And the INO incubator is now drawing interest from outside Québec. A New Brunswick company, Picketa, officially came on board in November 2021. Mosaic Sensors in Alberta, the Icelandic company DTE Metals Intelligence, and Entangled Networks, an Ontario-based quantum technology company, were all accepted in March 2022. What a boon to the local economy!

And finally, as another sign of the growing interest in Quantino, the incubator is moving into public outreach. This year the team was busy with *Inspiration by Quantino*, a series of events that aim to make science more accessible to the public, and young people in particular. The first edition, which sold out, drew near to 350 people to Musée de la civilisation on April 7, 2022, to hear aerospace engineer Farah Alibay and astrophysicist and science communicator Nathalie Ouellette. The event was a huge success in a string of huge successes at Quantino in 2021–2022!

2021 NEW INCUBATEE | **BIOTWIN**

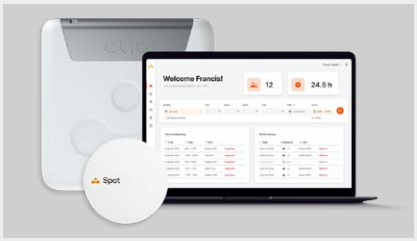
BioTwin aims to revolutionize the wellness and healthcare fields through the use of digital twin technology. A digital twin is a virtual replica of a physical object—a human in this case. BioTwin is an AI-powered solution to help health professionals predict, prevent, and simulate health problems in their patients before they happen.

2021 NEW INCUBATEE | **FEMTUM**

Femtum is developing the world's only line of lasers for use in the precise micromachining of non-metallic materials like polymers, semiconductors, organic materials, and thin films. The company is marketing a new generation of mid-infrared pulsed fibre lasers, fibre amplifiers, and tunable lasers for scientific, medical, and industrial applications.

2021 NEW INCUBATEE | **GPHY**

GPHY's mission is to create a smarter world. Using the ELIA workspace, businesses can now wirelessly connect their talent to their infrastructure. The widespread adoption of hybrid work models has upended the world of employment. Employers that want to offer this benefit need to rethink their IT infrastructure and workspaces to create a great hybrid work experience.



2021 NEW INCUBATEE | **HERBIAERA**

HerbiaEra develops and markets horticultural innovations that allow people with limited time, space, or knowledge to effortlessly grow their own food at home year-round. The company promotes home farming with an all-in-one solution comprising a smart indoor planter, a proprietary substrate, and a mobile app.

2021 NEW INCUBATEE | **PICKETA SYSTEMS**

Picketa Systems is a New Brunswick agribusiness startup that has developed a portable real-time soil and plant scanning technology to manage in-season fertilizer applications. It uses artificial intelligence to help farmers make fertilizer decisions based on the actual needs of crops.

2021 NEW INCUBATEE | **SPHAIRA**

Sphaira develops and markets everyday and specialty products with effective disinfection features to curb the transmission and spread of microbes responsible for severe contagious diseases, primarily for use in the healthcare and education sectors.

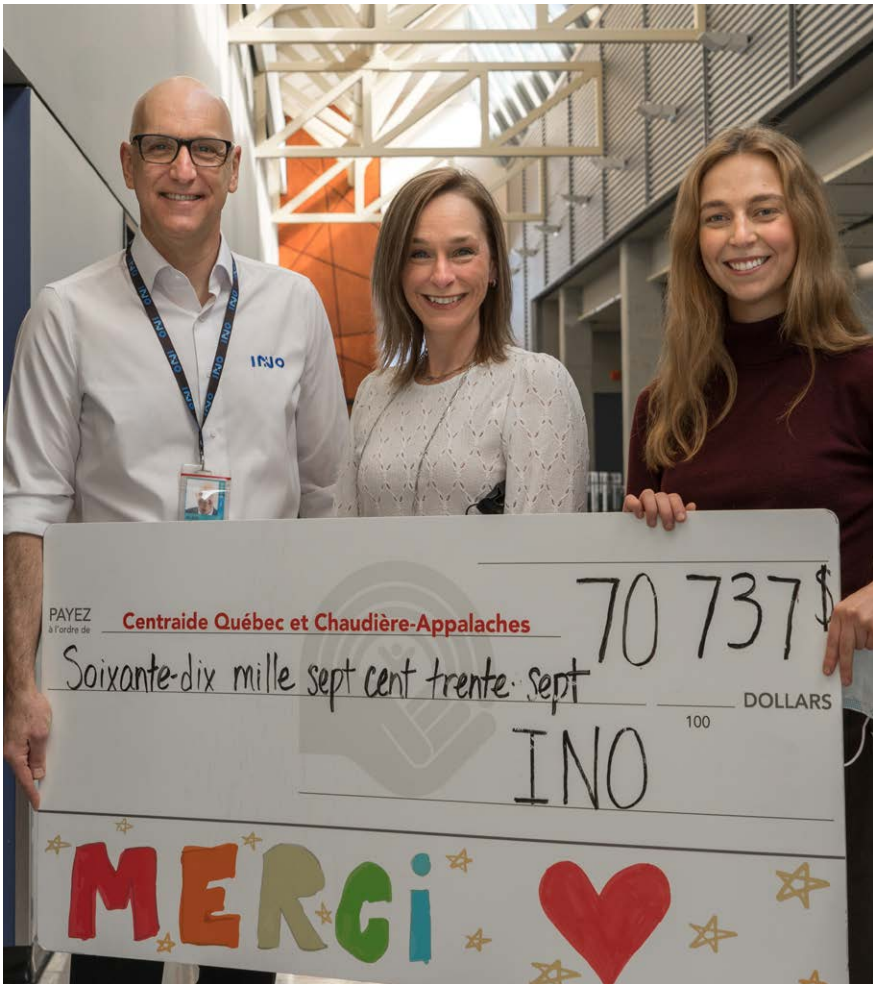
Centraide
Québec et
Chaudière-Appalaches

IN IT TOGETHER

The INO team rose to the occasion once again during the most recent Centraide Québec et Chaudière-Appalaches fundraising campaign, even surpassing our record-breaking 2020 haul. This year's $70,000 Centraide donation will help more than 210 community organizations provide frontline services to local residents in need.

Centraide Québec et Chaudière-Appalaches once again recognized INO's impressive turnout and high average donation per employee with a Distinction award in the category of IT companies with more than 150 employees.

Congratulations to the entire team!



Photo, from left to right: Alain Chandonnet, INO President and CEO, Isabelle Gagné, Business Partner – Human Experience and Culture and Fundraising Campaign Chair, and Catherine Sansregret, Advisor – Partnerships and Development at Centraide Québec et Chaudière-Appalaches

A CEO COMMITTED TO THE CAUSE

At INO, we're invested in our community. So it was only natural for President and CEO Alain Chandonnet to demonstrate his personal investment by serving as co-chair of Centraide Québec et Chaudière-Appalaches's 2021 campaign. As a man who has always been inspired when his peers in the business community take up different social causes, he was more than willing to step up. Alain has also been an advocate for mutual aid and the redistribution of wealth for as long as he can remember. As he likes to say, "We're all dealt a hand of cards in life—some people get a good one and others are less fortunate. So we have to help those who don't always have the best cards to play." Joined by three other co-chairs, Olga Farman, Geneviève Fortier, and Jean St-Gelais, he helped Centraide Québec et Chaudière-Appalaches raise more than $17 million for its 2021 campaign—a new record.

COMMITTEES AND ECOSYSTEM

BOARD OF DIRECTORS

JACQUES TOPPING [4*]
Corporate Director
Board Chair

KATHY BAIG [3]
Corporate Director

CAROLINE BOUDOUX [3]
Professor,
Department of Engineering Physics,
Polytechnique Montréal

ALAIN CHANDONNET
President and CEO, INO

HÉLÈNE CHARTIER [3*]
Executive Director,
QG100 Network

DENIS FAUBERT [3, 4]
Research, Development and
Innovation Consultant

FRANÇOIS GIROUX [2*, 4]
President, Gentec

VANESSA GRONDIN [2, 4]
Vice-President and Chief
Agrifood Industry Strategist,
Optel Group

SÉBASTIEN PROULX [1]
Lawyer and Strategic Advisor in Public
Law and Relations with the State,
GBV Lawyers

VÉRONIQUE PROULX [1]
President and CEO,
Manufacturiers et exportateurs
du Québec, Senior Vice-President,
Canadian Manufacturers
& Exporters

HUGUES ST-PIERRE [1*, 2]
Corporate Director
President, MAXXAB

THEY WERE ALSO MEMBERS OF THE BOARD IN 2021-2022:

- **Paule De Blois**
  President and CEO, Axelys
- **Guy Laberge**
  Corporate Director
- **Jean-Guy Paquet**
  Corporate Director

[1*] Chair, Governance and Human Capital Committee
[1] Member, Governance and Human Capital Committee
[2*] Chair, Audit Committee
[2] Member, Audit Committee
[3*] Chair, Innovation Committee
[3] Member, Innovation Committee
[4*] Chair, Major Proposals Committee
[4] Member, Major Proposals Committee

MANAGEMENT TEAM

ALAIN CHANDONNET
President and CEO

MICHEL ARNAULT
Vice-President,
Chief Operating Officer

PHILIPPE BOIVIN
Vice-President,
Corporate Affairs

LOUIS MARTEL
Vice-President,
Business Development
and Partnership

ANDRÉ FOUGÈRES
Vice-President,
Chief Technology Officer

MARTIN LARRIVÉE
Vice-President,
Finance

KARINE ROMAIN
Vice-President,
Human Experience and Culture

MEMBERS

AFFILIATE MEMBERS

- Bell Canada
- Desjardins Entreprises – Québec-Capitale

ASSOCIATE MEMBERS

- ABB
- CorActive
- EXFO
- Gentec Electro-Optics
- Leddartech
- Telops
- Teraxion
- Université Laval
- University of Ottawa

ASSOCIATE RESEARCHERS

ALI BAHLOUL
Institut de recherche Robert-Sauvé en santé et sécurité au travail

CLOTHILDE BROCHOT
Concordia University

SYLVAIN CLOUTIER
École de technologie supérieure (ÉTS)

YVES DE KONINCK
Université Laval

MARTINE DORAIS
Université Laval

CAROLINE DUCHAINE
Université Laval

COSTEL FLUERARU
National Research Council of Canada

TIGRAN GALSTIAN
Université Laval

LUCIE GERMAIN
Université Laval

FABRICE GODEFROY
City of Montreal

PHILIP JACKSON
Université Laval

THOMAS JENNEWEIN
University of Waterloo

MATTHEW JOHNSON
Carleton University

DENIS LAURENDEAU
Université Laval

BORIS LE DROGOFF
INRS

MARIO LECLERC
Université Laval

OZZY MERMUT
York University

PATRICK ROCHETTE
Université Laval
Hôpital du Saint-Sacrement

CHRISTOPHE PY
National Research Council of Canada

MANOJ SACHDEV
University of Waterloo

NATHALIE TURGEON
Université Laval

RÉAL VALLÉE
Université Laval

WILLIAM WONG
University of Waterloo

MIKE WOTTON
University of Toronto

SPIN-OFF COMPANIES

UMANX // 2019
Optical sensor for security robot

LYNX INSPECTION // 2018
Digital imaging system for industrial inspection

DXBIOTECH // 2017
Compact cytometer

SWIFTSURE // 2017
Optronics processor for synthetic aperture radar

FLYSCAN // 2016
Lidar for benzene detection

RAYSECUR // 2015
Terahertz technology for letter bomb detection

TECHNOLOGIES ET SERVICES INOOXX // 2013
Lidar measurement and laser triangulation technology to measure truck load volume

HANDYEM // 2011
Compact cytometer

OPTIRYTHMIX // 2011
Virtuo library

COMPANY IN THE ENVIRONMENTAL FIELD (CONFIDENTIAL) // 2010

PAVEMETRICS // 2009
Machine vision systems for the inspection of transportation infrastructures

REALTRAFFIC TECHNOLOGIES // 2008
Image analysis

HEDZOPT // 2007
Thermal weapon sight

LEDDARTECH // 2007
LEDs for distance detection and measurement

QUANTUM BIOMEDICAL (QBM) // 2006
Endoscopic probe for intravascular diagnosis

IRPHOTONICS // 2004
Fluoride fibres and glasses

NEOPTIX // 2004
Temperature sensors

OPSENS // 2004
Fiber optic sensors

OPTOSECURITY // 2004
Optical correlator

PYROPHOTONICS LASERS // 2004
PEFI laser technology

CYBIOCARE // 2003
Hypoglycemia monitor and glucose meter

OBZERV TECHNOLOGIES // 2002
Vision systems

NEKS TECHNOLOGIES // 2001
Colour-based gingival tartar detection

TERAXION // 2000
Optical network components

CORACTIVE // 1998
Specialty optical fibers

PIERRE LANGLOIS CONSULTANT // 1997
Diffractive optics consulting

P&P OPTICA // 1995
Optics engineering shop

FISO TECHNOLOGIES // 1994
Fiber optic sensors

LENTILLES DORIC // 1994
Microlenses

OPTIWAVE CORPORATION // 1994
Integrated optics software

AEREX AVIONICS // 1993
Optoelectronics consulting

I/FO TECHNOLOGIES // 1993
Fiber optic technology consulting

OPTEL VISION // 1992
Optical instrumentation

INSTRUMENTS RÉGENT // 1990
Optical instrumentation

NORTECH FIBRONIC // 1989
Optical instrumentation

TECHNOLOGY TRANSFERTS

ABB
Pyramid wavefront sensor

AMERICAN COMPANY
Auto-centering technology

AMERICAN COMPANY
Diamond marking

AMERICAN UNIVERSITY
Bolometer electronic circuit

ARCANE TECHNOLOGIES
Computing library – Amazone

ASIAN COMPANY
Bolometers

ASIAN COMPANY
CO2 laser cleaving

ASIAN COMPANY
Fiber components

ASIAN COMPANY
Reading circuit

ASIAN COMPANY
Terahertz imaging

ASIAN INTEGRATOR
MOPAW laser

ASIAN RESEARCH INSTITUTE
Bolometers

AUTOLOG
3D imaging calibration software
Source code
Planovision

AVENSYS/BRAGG PHOTONICS
All-fiber photo-induced filters

BRIO CONSEILS
Managerial innovation in the development process

BRISTOL AEROSPACE
Infrared detector

CANADIAN COMPANY
Infrared imaging

COMMUNICATIONS RESEARCH CENTRE CANADA
Integrated processes system (IPS)

CORACTIVE
Triple-clad specialty optical fibers

CTEX
Bolometers

CYBIOCARE
Hypoglycemia sensor and glucose meter

DELLUX TECHNOLOGIES
LED lights

DORIC LENSES
Graded refractive index microlenses

DXBIOTECH
Compact cytometer

EUROPEAN COMPANY
Lens auto-centring technology

EUROPEAN COMPANY
Bolometers

FISO TECHNOLOGIES
Fiber optic sensors for temperature, stress, and pressure
End-of-service indicator for breathing apparatus

FLYSCAN
Lidar for benzene detection

GENTEC ELECTRO-OPTICS
Holographic beam sampler

HANDYEM
Flow cytometry

HEDZOPT
Thermal weapon sight

IOMNISCIENT
Classification module

IRPHOTONICS
Fluoride fibers

KRISPY KERNELS
Hyperspectral vision system for quality control

LASIRIS
Diffractive optical elements

LEDDARTECH
LEDs for distance detection and measurement

LYNX INSPECTION
3D imaging system

MAIBEC
Feature detection of cedarwood shingles

MICROSPHERE
Optical correlator for inspection of plastic components

MPB
Infrared spectrometer

NEKS TECHNOLOGIES
Colour-based gingival tartar detection

NETCORP
Optical switch

NORMAND PROJEX
Inspection system for 3D verification of hardwood floor mortise and tenon dimensions

NORTECH FIBRONIC
Fiber optics temperature sensors
Tunable fiber laser

OBZERV TECHNOLOGIES
DALISTM laser illuminator

OIL SECTOR COMPANY
Fiber sensor technology

OPTIRYTHMIX
Virtuo library

OPTIWAVE CORPORATION
Integrated optics software

OPTOSECURITY
INOSegmenter - Image segmentation software
Numerical optical correlator technology
Optical correlator

OXFORD UNIVERSITY
Bolometer electronic circuit

PAVEMETRICS
Machine vision systems for the inspection of transportation infrastructures
Machine vision systems for a new scope of application

PYROPHOTONICS LASERS
PyFl fibre laser unfolded cavity configuration
PEFl laser technology

QUANTUM BIOMEDICAL (QBM)
Endoscope for intravascular diagnosis

RAYSECUR
Terahertz technology

REALTRAFFIC TECHNOLOGIES
Image analysis

REGENT INSTRUMENTS
Optical instrumentation

SEARIDGE TECHNOLOGIES
Video monitoring technology
Video surveillance and detection technology and source codes

SEASTAR OPTICS
Erbium fibre laser

SOLVISION
Structured light projector

STAS
Hydrogen fluoride detector

SWIFTSURE
Optronic processor for synthetic aperture radar

SYGIF INTERNATIONAL
Integrated processes system—IPS

SYMBIOTECH MEDICAL
Intra-arterial analysis and detection

TELEDYNE DALSA
Bolometers

TELOPS
Integrated processes system—IPS

WESTERN CANADIAN OIL SECTOR COMPANY
Fibre optic sensors

FINANCIAL STATEMENTS

SUMMARY FINANCIAL STATEMENTS

INDEPENDENT AUDITORS' REPORT

To the members of National Optics Institute

OPINION

The summary financial statements of National Optics Institute (the «Entity»), which comprise:

- the summary statement of financial position as at March 31, 2022
- the summary statement of operations for the year then ended
- the summary statement of changes in net assets for the year then ended
- the summary statement of cash flows for the year then ended
- and related notes

(hereinafter, the «summary financial statements»),

are derived from the audited financial statements of National Optics Institute as at and for the year ended March 31, 2022 (the «audited financial statements»).

In our opinion, the accompanying summary financial statements are consistent, in all material respects, with the audited financial statements, in accordance with the criteria disclosed in Note 1 in the summary financial statements.

SUMMARY FINANCIAL STATEMENTS

The summary financial statements do not contain all the disclosures required by Canadian accounting standards for not-for-profit organizations. Reading the summary financial statements and the auditors' report thereon, therefore, is not a substitute for reading the Entity's audited financial statements and the auditors' report thereon.

The summary financial statements and the audited financial statements do not reflect the effects of events that occurred subsequent to the date of our report on the audited financial statements.

THE AUDITED FINANCIAL STATEMENTS AND OUR REPORT THEREON

In our report dated June 17, 2022, we have issued an unmodified opinion on the audited financial statements for the year ended March 31, 2022.

MANAGEMENT'S RESPONSIBILITY FOR THE SUMMARY FINANCIAL STATEMENTS

Management is responsible for the preparation of the summary financial statements in accordance with the criteria disclosed in Note 1 in the summary financial statements.

AUDITORS' RESPONSIBILITY

Our responsibility is to express an opinion on whether the summary financial statements are consistent, in all material respects, with the audited financial statements based on our procedures, which were conducted in accordance with *Canadian Auditing Standards 810, Engagements to Report on Summary Financial Statements*.

Québec, Canada

June 17, 2022

KPMG LLP*

* CPA auditor, CA, public accountancy permit No A125181

SUMMARY STATEMENT OF FINANCIAL POSITION

March 31, 2022, with comparative information for 2021

	2022	2021
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	**$ 11,664,058**	$ 77,843,372
Accounts receivable	**3,233,744**	3,498,796
Financial support receivable related to internal research program (note 2(a))	**-**	1,000,000
Financial support receivable related to tangible capital assets and intangible assets (note 2(b))	**522,161**	2,453,637
Financial support receivable related to the entrepreneurship assistance program (note 2(c))	**28,361**	-
Inventories	**976,153**	1,119,091
Research contracts in progress	**511,375**	1,655,423
Prepaid expenses	**752,390**	586,789
Current portion of investments	**15,496,230**	4,397,052
	33,184,472	92,554,160
Investments	**49,928,040**	4,478,818
Investments in private companies	**721,443**	925,504
Tangible capital assets	**27,859,826**	28,721,303
Intangible assets	**301 834**	468,835
	$ 111,995,615	$ 127,148,620
LIABILITIES AND NET ASSETS		
CURRENT LIABILITIES		
Accounts payable and accrued liabilities	**$ 6,164,434**	$ 10,196,468
Deferred revenues and deposits on contracts	**2,909,550**	1,218,578
Current portion of long-term debt	**717,649**	655,311
Deferred financial support related to internal research program (note 2(a)(ii))	**13,700,000**	13,641,883
	23,491,633	25,712,240
Long-term debt	**1,576,641**	1,712,890
Employee future benefits obligations	**1,669,514**	2,675,358
Deferred financial support related to tangible capital assets and intangible assets (note 2(b))	**38,300,763**	39,509,693
Deferred financial support related to internal research program (note 2(a))	**34,600,000**	46,300,000
	99,638,551	115,910,181
NET ASSETS	**12,357,064**	11,238,439
Commitments (note 4)		
	$ 111,995,615	$ 127,148,620

See accompanying notes to summary financial statements.

On behalf of the Board:

Director

Director

SUMMARY STATEMENT OF OPERATIONS

Year ended March 31, 2022, with comparative information for 2021

	2022	2021
REVENUES		
Financial support related to internal research program (note 2(a))	**$ 22,700,000**	$ 23,400,000
Financial support related to tangible capital assets and intangible assets (note 2(b))	**2,074,647**	1,909,032
Financial support related to the entrepreneurship assistance program (note 2(c))	**398,468**	442,877
Sales and contracts	**14,548,186**	15,410,671
Investment income	**1,595,067**	-
Dividend income	**587,466**	658,950
Royalties	**238,043**	231,089
Rent and other revenues	**328,577**	198,446
Members' contributions	**30,000**	31,000
	42,500,454	42,282,065
EXPENSES		
Salaries and fringe benefits	**24,683,865**	24,323,989
Cost of goods and services pertaining to project completion	**6,292,586**	5,689,896
Other operating expenses	**8,258,860**	7,163,014
Foreign exchange loss	**112,865**	290,484
Other than temporary decline in value on investments in private companies	**241,433**	232,090
Interest on long-term debt	**77,319**	81,501
Interest and bank charges	**120,680**	124,017
Depreciation of tangible capital assets	**3,020,647**	2,797,248
Amortization of intangible assets	**167,001**	184,481
	42,975,256	40,886,720
OTHER REVENUES		
Canada Emergency Wage subsidy	**1,012,027**	3,827,615
EXCESS OF REVENUES OVER EXPENSES FOR THE YEAR	**$ 537,225**	$ 5,222,960

See accompanying notes to summary financial statements.

SUMMARY STATEMENT OF CHANGES IN NET ASSETS

Year ended March 31, 2022, with comparative information for 2021

	2022	2021
NET ASSETS, BEGINNING OF YEAR	**$ 11,238,439**	$ 3,256,879
Excess of revenues over expenses for the year	**537,225**	5,222,960
	11,775,664	8,479,839
Remeasurements and other items	**581,400**	2,758,600
NET ASSETS, END OF YEAR	**$ 12,357,064**	$ 11,238,439

See accompanying notes to summary financial statements.

SUMMARY STATEMENT OF CASH FLOWS

Year ended March 31, 2022, with comparative information for 2021

	2022	2021
CASH PROVIDED BY (USED IN)		
OPERATING		
Excess of revenues over expenses for the year	**$ 537,225**	$ 5,222,960
Items not involving cash:		
Depreciation of tangible capital assets	**3,020,647**	2,797 ,248
Amortization of intangible assets	**167,001**	184,481
Amortization of premiums and discounts on coupons and bonds	**24,247**	10,415
Adjustment related to employee future benefits	**(424,444)**	(124,325)
Financial support related to tangible capital assets and intangible assets (notes 2(b))	**(2,074,647)**	(1,909,032)
Deferred financial support recognized in revenues (note 2(a))	**(11,641,883)**	(7,000,000)
Other than temporary decline in value on investments in private companies	**241,433**	232,090
Changes in non-cash working capital items	**1,911,118**	1,836,285
	$ (8,239,303)	$ 1,250,122
FINANCING		
Net change in bank loans	**-**	(1,360,491)
Increase in long-term debt	**612,000**	865,811
Repayment of long-term debt	**(685,911)**	(547,637)
Investment income generated related to deferred financial support (note 2(a))	**-**	166,674
Financial support used (note 2(a))	**865,717**	3,004,982
Financial support related to internal research program received in advance (note 2(a))	**-**	55,000,000
Financial support related to the building received in advance (note 2(b)(iv))	**-**	20,000,000
	791 806	77 129 339
INVESTING		
Acquisitions of tangible capital assets	**(2,159,170)**	(6,124,248)
Acquisitions of intangible assets	**-**	(330,940)
Acquisition of a term deposit	**(400,000)**	(100,000)
Disposal of a term deposit	**100,000**	100,000
Acquisition of investments	**(60,573 936)**	-
Disposal of investments	**4,301,289**	4,280,300
	(58,731,817)	(2,174,888)
Net (decrease) increase in cash and cash equivalents during the year	**(66,179 314)**	76,204,573
Cash and cash equivalents, beginning of year	**77,843,372**	1,638,799
CASH AND CASH EQUIVALENTS, END OF YEAR	**$ 11 664 058**	$ 77,843,372

See accompanying notes to summary financial statements.

NOTES TO SUMMARY FINANCIAL STATEMENTS

Year ended March 31, 2022, with comparative information for 2021

The National Optics Institute («INO») was incorporated on December 31, 1985 under Part II of the *Canada Business Corporations Act* and continued on September 11, 2013 under the *Canada Not-for-profit Corporations Act.* Its mandate is to bring to life innovations that enable the Canadian industry to be more productive and competitive.

As a non-profit organization, INO is exempt from income tax.

1. BASIS FOR PRESENTATION

INO elected to prepare the summary financial statements based on the following criteria:

(a) Presentation of a set of financial statements which includes a summary financial position, a summary statement of operations, a summary statement of changes in net assets, and a summary statement of cash flows;

(b) Use of the same presentation for the summary financial statements as for the audited financial statements, except for cross-references to notes disclosures;

(c) Exclusion of notes to financial statements, unless their omission would prevent the financial statements users from having a clear understanding of economic resources and obligations at a period-end or their evolution during the period then ended.

INO's complete set of financial statements are available upon request from management.

2. FINANCIAL SUPPORT:

a) Financial support - internal research program:

The financial support that INO receives as part of the internal research program is as follows:

			2022
	Total support	Remaining support balance available as at March 31, 2022	Revenues
Government of Canada Canada Economic Development	$50,000,000	$38,000,000	$12,000,000
Government of Québec	80,000,000	48,300,000	10,700,000
Financial support - internal research program	$130,000,000	$86,300,000	$22,700,000

FINANCIAL SUPPORT (CONTINUED)

a) Financial support - Internal Research Program (continued)

			2021
	Total support	Remaining support balance available as at March 31, 2021	Revenues
Government of Canada Canada Economic Development	$50,000,000	$ -	$10,000 000
Government of Québec	112,000,000	59,000,000	13,400,000
Financial support - internal research program	$162,000,000	$59,000,000	$23,400,000

i) Government of Canada

In July 2021, the Government of Canada, through the Business and Regional Growth Program of Canada Economic Development, granted INO financial support of up to $50,000,000 over a five-year period ending on March 31, 2026, for INO's internal research program. As of March 31, 2022, the receivable amount is nil. As at March 31, 2021, an amount of $1,000,000 was receivable from the previous agreement with the Government of Canada.

ii) Government of Québec:

In July 2016, the Government of Québec granted INO financial support of $32,000,000 over a five-year period ending on March 31, 2021 for INO's internal research program. The amount of $6,400,000 allocated for the year was received in full as at March 31, 2021.

In March 2017, the Government of Québec granted INO additional financial support in an amount of $25,000,000 for the period from April 1, 2017 to March 31, 2022 to carry out research activities and develop expertise in the areas of IoT (Internet of Things), advanced robotics and 3D printing, as well as to establish an office in the Montréal area. This financial support had been received in full as at March 31, 2017, and an amount of $4,000,000 was used during the year ended March 31, 2022 (2021 - $7,000,000).

In March 2021, the Government of Québec granted INO financial support in an amount of $55,000,000 for the period from April 1, 2021 to March 31, 2026 for INO's internal research program. This financial support had been received in full as at March 31, 2021 and an amount of $6,700,000 was used during the year ended March 31, 2022.

FINANCIAL SUPPORT (CONTINUED)

a) Financial support - Internal Research Program (continued)

Deferred financial support under the internal research program is as follows:

	2022	2021
Balance, beginning of year	**$ 59,941,883**	$ 11,775,209
Financial support - internal research program	**-**	55,000,000
Investment income generated	**-**	166,674
Amount recognized in revenues during the year	**(11,641,883)**	(7,000,000)
	48,300,000	59,941,883
Less: current portion	**13,700,000**	13,641,883
BALANCE, END OF YEAR	**$ 34,600,000**	$ 46,300,000

b) Support program related to tangible capital assets and intangible assets

i) In September 2018, the Government of Québec granted INO financial support of up to $3,992,816 to reimburse INO directly for 80% of the acquisition cost of research equipment. Financial support is paid as disbursements are made by INO. As at March 31, 2022 and 2021, a balance of $399,281 was receivable.

ii) In 2019, the Government of Québec granted INO financial support of up to $1,024,000 for major work on the building. Financial support is paid as disbursements are made by INO. As at March 31, 2022, a balance of $122,880 was receivable (2021 - $548,259).

iii) In January 2021, the Government of Canada granted INO financial support of up to $2,250,000 to reimburse INO for 75% of the acquisition cost of research equipment. Financial support is paid as costs are incurred and invoiced. As at March 31, 2022, the receivable amount is nil (2021 - $1,506,097).

iv) In March 2021, the Government of Québec granted INO financial support of up to $20,000,000 for the period from April 1, 2021 to March 31, 2026 to reimburse INO directly for 80% of the cost of major work on the building. Financial support had been received in full as at March 31, 2021, and an amount of $265,812 was used during the year ended March 31, 2022.

The deferred financial support to tangible capital assets and intangible assets is as follows:

	2022	2021
Balance, beginning of year	**$ 39,509,693**	$ 17,929,301
Financial support related to the building over the period from April 2021 to March 2026	-	20,000,000
Financial support related to the purchase of tangible capital assets and intangible assets for the year	**865,717**	3,489,424
Transfer to revenues to offset the corresponding depreciation and amortization	**(2,074,647)**	(1,909,032)
BALANCE, END OF YEAR	**$ 38,300,763**	$ 39,509,693

FINANCIAL SUPPORT (CONTINUED)

c) Financial support related to the entrepreneurship assistance program:

i) In January 2020, the Government of Québec granted INO financial support of $375,000 for a three-year period ending March 31, 2024 to support assistance activities for start-up entities. As at March 31, 2022, an amount of $215,051 had been received in advance (2021 - $125,000).

ii) In March 2020, the City of Québec granted INO financial support of $1,400,000 for the period from October 19, 2019 to March 31, 2023 in order to set up an incubator dedicated to optics-photonics technology. As at March 31, 2022, an amount of $28,361 was receivable (2021 - nil).

d) Financial assistance relating to the support program for research-innovation projects:

In March 2020, the Government of Québec granted INO financial support of $600,000 for a three-year period to support the completion of an industrial research program in quantum photonics. As at March 31, 2022, a balance of $326,000 had been received in advance (2021 - $186,000).

3. EMPLOYEE FUTURE BENEFITS:

INO offers employee future benefit plans, including a defined benefit plan guaranteeing the payment of pension benefits to some of its employees. The benefits are based on years of service and final average salary.

a) Defined benefit pension plan:

The most recent complete actuarial valuation of the pension plan was performed on December 31, 2019 and was extrapolated as at March 31, 2022. The funded status of the defined benefit plans is as follows:

	2022	2021
Defined benefit obligations	**$ (50,887,100)**	$ (48,666,700)
Fair value of plan assets	**49,428,600**	46,486,500
Defined benefit liability	**$ (1,458,500)**	$ (2,180,200)

b) Other employee future benefits:

The decrease in the provision relating to these obligations had no effect in salaries and fringe benefit expenses for the years ended March 31, 2022 and 2021.

As at March 31, 2022, the employee future benefits obligations were as follows:

	2022	2021
Defined benefit pension plan	**$ 1,458,500**	$ 2,180,200
Other employee future benefits	**211,014**	495,158
	$ 1,669,514	$ 2,675,358

Remeasurements and other items of $581,400 (2021 - $2,758,600) have been allocated directly to net assets.

4. COMMITMENTS

INO is committed under lease agreements expiring between June 2022 and June 2024 to rent office spaces and a vehicle. INO has also committed, under a service contract expiring in January 2025, to receive cybersecurity services. The minimum payments required over the next three years are as follows:

2023	$256,083
2024	$243,249
2025	$166,355

5. SUBSEQUENT EVENT:

In April 2022, the Government of Canada granted financial support of up to $2,796,000 to reimburse INO directly for 40% of the acquisition cost of scientific equipment and 80% of the acquisition cost of computer equipment.

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