20/21 ANNUAL REPORT

INO

SHEDDING LIGHT

SHEDDING LIGHT ENVIRONMENT **SHEDDING LIGHT** NATURAL RESOURCES **SHEDDING LIGHT** ENERGY **SHEDDING LIGHT** INFRASTRUCTURE **SHEDDING LIGHT** FOOD AND AGRICULTURE **SHEDDING LIGHT** AEROSPACE **SHEDDING LIGHT** AERONAUTICS **SHEDDING LIGHT** PHARMACEUTICAL INDUSTRY **SHEDDING LIGHT** DEFENCE SECURITY **SHEDDING LIGHT** MEDICAL DEVICES **SHEDDING LIGHT** ENVIRONMENT **SHEDDING LIGHT** NATURAL RESOURCES **SHEDDING LIGHT** ENERGY **SHEDDING LIGHT** INFRASTRUCTURE **SHEDDING LIGHT** FOOD AND AGRICULTURE **SHEDDING LIGHT** AEROSPACE **SHEDDING LIGHT** AERONAUTICS **SHEDDING LIGHT** PHARMACEUTICAL INDUSTRY **SHEDDING LIGHT** DEFENCE SECURITY **SHEDDING LIGHT** MEDICAL DEVICES **SHEDDING LIGHT** ENVIRONMENT **SHEDDING LIGHT** NATURAL RESOURCES **SHEDDING LIGHT** ENERGY **SHEDDING LIGHT** INFRASTRUCTURE **SHEDDING LIGHT** FOOD AND AGRICULTURE **SHEDDING LIGHT** AEROSPACE **SHEDDING LIGHT** AERONAUTICS **SHEDDING LIGHT** PHARMACEUTICAL INDUSTRY **SHEDDING LIGHT** DEFENCE SECURITY **SHEDDING LIGHT** MEDICAL DEVICES


INO

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

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

TABLE OF CONTENTS

TOWARD AN INDUSTRIAL-SPEED ECONOMIC RECOVERY

« Generating economic value motivates us; seeing our clients prosper encourages us to excel. »

More than a year has passed since the stealth arrival of COVID-19 in our daily lives, but this period of economic uncertainty is slowly giving way to an outlook of vigorous growth for the Canadian economy. The speed at which the country surpasses its pre-pandemic activity levels will depend on a large number of factors that include a strong job market, a resurgence in exports, and a return to profitable investments in technology by our innovating companies. INO's innovation record is beyond enviable, and we are now, more than ever, a first-rank driving force for economic development that our governments and companies can rely on for a prosperous and sustainable economy.

The 35 companies resulting from INO's efforts today provide more than 2,000 high-level jobs, and the incubation of emerging businesses at Quantino will contribute to further revolutionizing today's industries to create those of tomorrow. In addition to the high-level research and development carried out at INO, technology innovations attributable to the team enabled our clients to contribute nearly half a billion dollars in direct benefits to the country last year. In other words, every public dollar invested in INO results in $20 in value for the Canadian GNP.[1] Generating economic value motivates us; seeing our clients prosper through sustainable development encourages us to go the extra mile.

The numbers speak for themselves. Investing in the development of a specialized industrial innovation centre like INO, which serves as a bridge between academic research and industry, is a strategic and rewarding choice for creating direct, immediate, and significant benefits for our companies and workers.

---

1 2020 Study of Economic Benefits, AECOM Consultants, November 2020

RENEWED GOVERNMENT TRUST

On the strength of our results over the last fiscal year, INO was able to negotiate renewed funding arrangements with our government partners. Among other things, the resulting five-year agreements will enable our organization to grow, to upgrade our facilities, and to transform the membership formula to include a collaborative method for investment in in-house research activities. Through such close cooperation with representatives from a variety of industrial sectors who will sit on R&D advisory committees, INO will work on solutions to meet the associated companies' immediate challenges, and, as a result, generate still more economic value to better position Canada and Quebec as major players in the global innovation game. This sign of trust by Canadian and Quebec governments comes with a firm promise on our part: We commit ourselves to using science and technology in a manner most productive for the economy, thus multiplying the benefits from public investment. The speed with which these benefits materialize is that much more important in the current climate of economic recovery.

AN INCREASINGLY INCLUSIVE ORGANIZATION

Because we deeply believe in the importance of increasing diversity in the business environment, INO signed on to the Government of Canada's 50-30 Challenge. The goal of this initiative is to facilitate access to positions of influence for women, members of visible minorities, and the LGBTQ2 community, as well as physically challenged individuals. We are believers; workplace diversity is an asset. In fact, our board of directors has reached the men-women parity zone.

SINCERE THANKS TO INO's TALENTED PLAYERS

INO's pursuit of our mission is possible thanks to the talent of our members of management, the team, and the directors. I would therefore like to thank them all for serving industrial clients with their innovation and solution development skills – skills that demonstrate imagination, drive businesses, and change lives by making our world more productive while protecting resources for generations to come.

The future is bright. Thank you!

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

INNOVATION THROUGH COLLABORATION

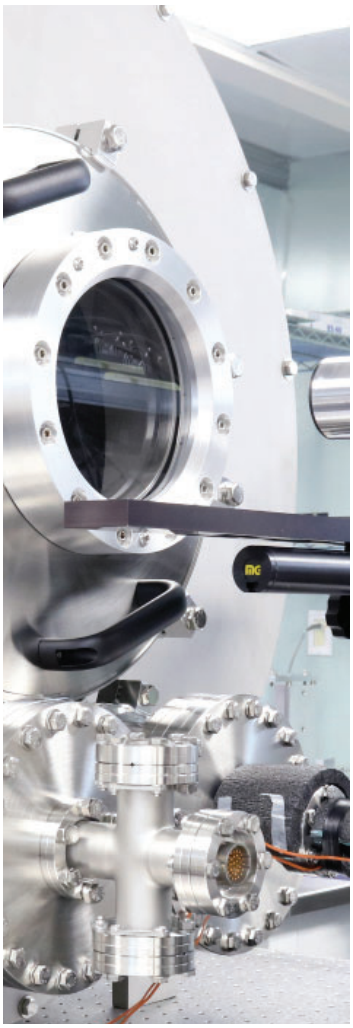
In 2019-2020, after enjoying our best year in two decades in terms of external revenue, INO began 2020-2021 with cautious optimism. Quebec had just recently declared a health emergency resulting in the temporary closure of many companies, and instituting teleworking on a large scale. Nevertheless, and in spite of the slowdown in economic activity, INO today shows a strong positive balance sheet, both in terms of development of new solutions and our financial results, and for completion of major corporate cases that enable our organization to undertake a new growth cycle.

Firstly, the funding agreements signed with the governments of Quebec and Canada are historic and provide us with significant resources. Each level of government raised its contribution to INO's operating budget by 10%, to a total of $110M over five years. This investment was complemented by an additional amount of $20M from the provincial government for a project to upgrade and enhance our infrastructure. Discussions are ongoing with the federal government for a matching contribution that will enable an expansion of the Quebec City facilities and adapt them to the level of the technology activities implemented there, and to arrange the working environment to address the reality of a hybrid mix of working on site and remotely.

The team prepared its 2021-2026 strategic plan in parallel with renewal of the federal and provincial agreements. INO is including still more of our clients and collaboration between innovation system players at the heart of our actions to develop solutions that will generate rapid and lucrative benefits in the post-pandemic recovery. More than ever, the end game of our work is not R&D itself, but the innovation that results in concrete, commercial or societal value for our clients.

A new initiative central to INO's 2021-2026 Economic Value Creation and Funding Plan is designed to stimulate corporate investment in innovation. INO will rework and revitalize the collaboration program aimed at our members to recruit and enable 100 or so companies to carry out cooperative industrial research for which INO will assume part of the project costs in exchange for open intellectual property. By collaborating thus with industry leaders and emerging

companies from a wide range of business sectors, INO will maximize the investments of the various levels of government and ensure that the intellectual property is converted into multiple concrete innovations for the benefit of a large number of companies.



LAUNCH OF QUANTINO, THE HIGH-TECH INCUBATOR DRIVEN BY INO

In the fall of 2020, INO launched Quantino, our incubator of young innovative companies, which welcomed its first incubatees. In a way, it was a logical follow-on to INO's historical successes in spinning off companies that confirm our position in deep tech and innovation. Thanks to support from the City of Quebec, the *Ministère de l'Économie et de l'Innovation*, and the entire INO team, Quantino is making available to its incubatees its leading-edge knowledge of the methods of developing complex products to make them marketable and compatible with international market standards.

In March 2021, Quantino broadened its activities to the medical domain by partnering with the *Institut universitaire de cardiologie et de pneumologie de Québec*'s research centre. The goal? To develop Quebec solutions to prevent and treat cardiovascular and respiratory ailments (including COVID-19 and other emergent viruses), as well as type-2 diabetes and obesity.

OUR FINANCIAL POSITION PERMITS US TO GO FURTHER

Despite an operational context complicated by health measures, financial results remained at significant levels, with external revenues of nearly $17M that enabled us to balance our operating budget quite nicely. Our assets as at March 31, 2021, reflect the $75M investment over the next five years from the Government of Quebec, and totalled $127.1M. Sound management over the past years, combined with government investments, put us in a good position to achieve the major development goals we set for ourselves between now and March 2026.

Major 2026 development objectives:

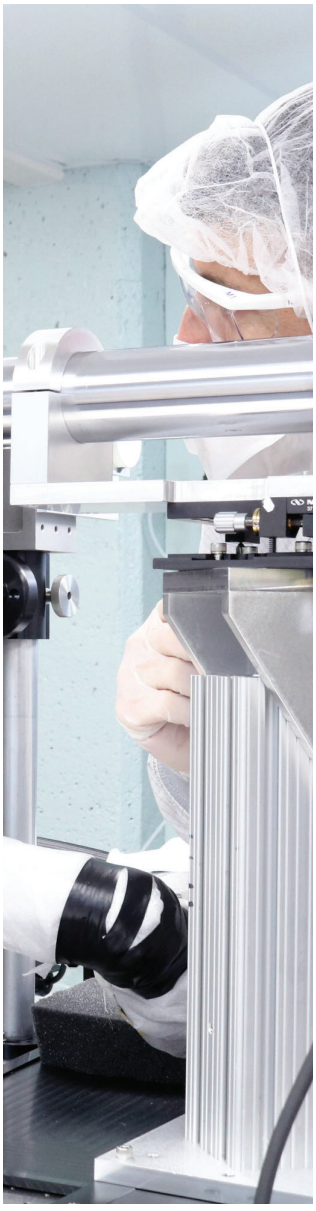
- **Increase our annual economic impact on Canada's GNP, from $500M to $700M;**
- **Create three new companies;**
- **Spin off 10 young companies with strong technological potential from Quantino;**
- **Physically deploy experts in 10 other areas of innovation and centres like INO;**
- **Raise the number of our industrial members to 100.**

SUCCEEDING IN OUR MISSION BY MAKING A DIFFERENCE IN OUR COMMUNITY

Beyond the technological development and its contribution to economic value generation, our team is also wholeheartedly involved in various philanthropic causes and contributes to the training of young scientific talent. Employee contributions to the *Centraide Québec et Chaudière-Appalaches* funding campaign broke records at $64,108, or an average donation of $437 per employee. This effort also earned INO a Centraide Distinction Award in the "Companies with over 150 Employees, Informatics and Technology Sector" category. My thanks to everyone for having shown such solidarity in acting against poverty and the vulnerability factors of our Quebec people.

In addition to this outstanding cooperation with our local community, you – the 215 INO employees – can be proud of the results of the past 12 months. You had to master an unprecedented working environment, deal with new technology methods, reconcile work and family because of home schooling and daycare closures, and sometimes faced solitude that can be hard to bear. Your ability to make the best of the situation has meant that our clients and partners were able to count on your innovation skills 100% in growing their organizations and positioning themselves for the post-pandemic recovery.

We are confident for the coming years and ready, thanks to our team of experts, to be a partner of choice in a large number of successes to come. Thank you!



Alain Chandonnet, Ph.D.
President & CEO

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

5 BUSINESS UNITS

- BIOMEDTECH
- DEFENCE, SECURITY AND AEROSPACE
- SUSTAINABLE RESOURCES, AGRICULTURE AND INFRASTRUCTURE
- ADVANCED MANUFACTURING
- INDUSTRIAL SOLUTIONS

21 PATENTS AWARDED
TO INO IN 2020-2021

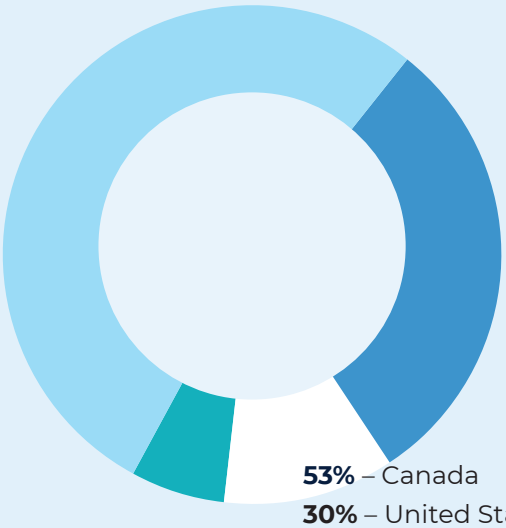
215 EMPLOYEES

MORE THAN 150 CLIENTS

75 TECHNOLOGY TRANSFERS

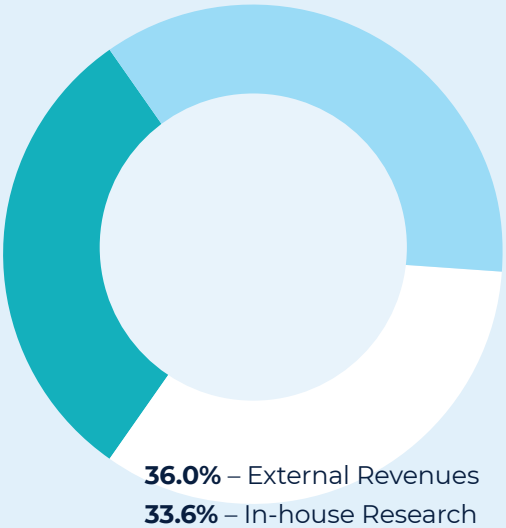
35 SPIN-OFF COMPANIES

CLIENT BREAKDOWN BY COUNTRY/CONTINENT



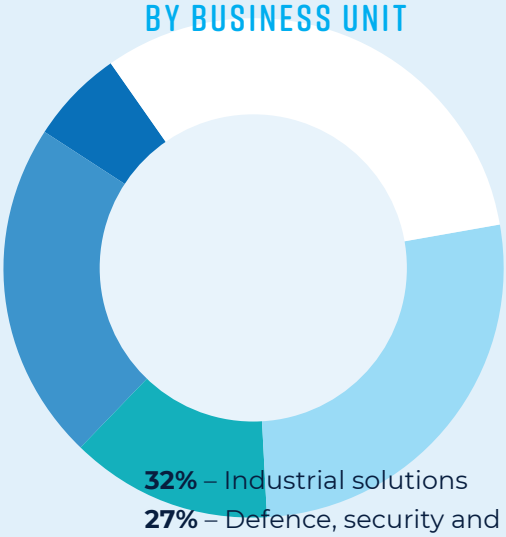
53% – Canada
30% – United States
11% – Asia
6% – Europe

DISTRIBUTION OF OPERATING REVENUES



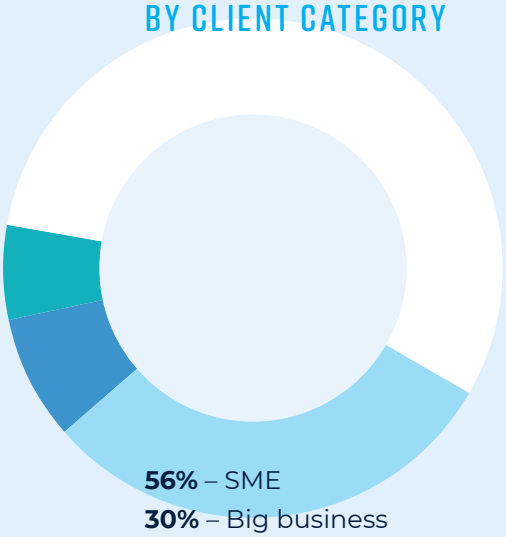
36.0% – External Revenues
33.6% – In-house Research Program - Quebec
30.4% – In-house Research Program - Canada

DISTRIBUTION OF REVENUES BY BUSINESS UNIT



32% – Industrial solutions
27% – Defence, security and aerospace
22% – Biomedtech
13% – Sustainable resources, agriculture and infrastructure
6% – Advanced manufacturing

DISTRIBUTION OF REVENUES BY CLIENT CATEGORY

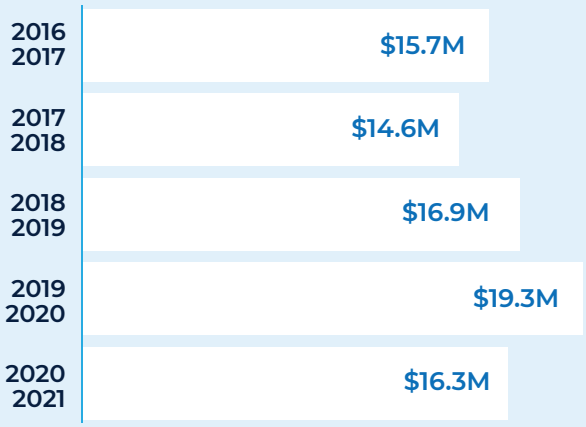


56% – SME
30% – Big business
8% – Government
6% – University

CHANGES IN TOTAL EARNINGS

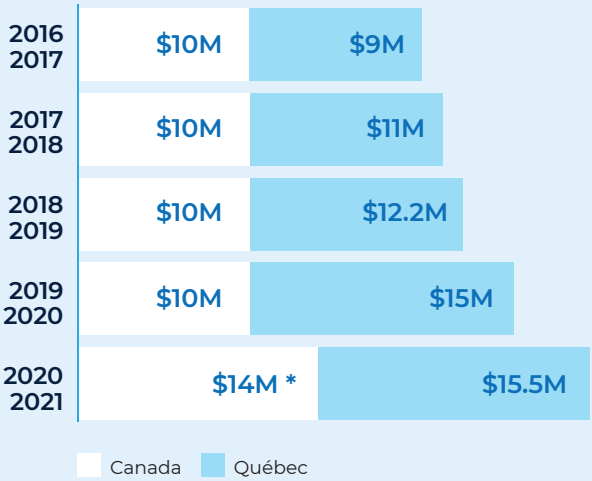
* Includes $3,8M of CEWS in 2020-2021

CHANGES IN EXTERNAL REVENUES *

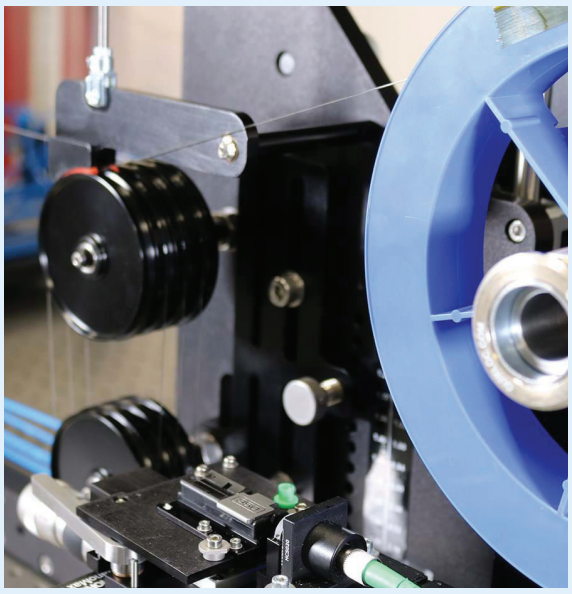


* R&D contracts, sales, transfer considerations, royalties, dividends

CHANGES IN GOVERNMENT FUNDING



* Includes $3,8M of CEWS in 2020-2021



R&D THAT RESPONDS TO SOCIOECONOMIC CHALLENGES, EVEN IN A TIME OF A PANDEMIC

By rapidly restructuring our work methods to comply with health measures, INO was able to pursue our technology activities and provide support to our industrial clients. The pandemic showed, even more than usually so, the importance of INO's contributions to Canadian industrial R&D, addressing significant socioeconomic challenges. In spite of the economic uncertainty, most of the companies that INO serves continued their development efforts, and many others chose INO to partner with them in their new projects, including development of medical devices, fugitive dust emission control, pipe inspection, and robotic harvesting of agricultural products.

The pandemic significantly strengthened INO's technology development program. A number of sectors that are considered essential and form the foundation of our economy, such as agriculture, food, and health and safety, found themselves in a critical and evolving situation exacerbated by imposed health quarantines and tightened borders.

AGRIFOOD

The pandemic underscored the labour shortage problems faced by the agricultural sector that relies on foreign workers for its annual needs. One solution to this problem is automated harvesting using robot pickers guided by sensors aided by artificial intelligence. INO has been contributing to the solution for several years with real-time detection and characterization of fruits and vegetables in their environment, with partners like Vineland, the Research and Development Institute for the Agri-Environment (IRDA), VegPro and, more recently, Lapalme Conception Mécanique and the *Centre de robotique et de vision industrielles (CRVI)*. After mushrooms and leafy vegetables, development is now focusing on sensors adapted to greenhouse cucumbers and field broccoli. As an example, the cucumber sensor provides non-deformed images, in depth and in colour, in two near infrared bands with a wide field of vision. It will enable the robot-picker to distinguish cucumbers from stems and leaves by measuring their moisture content.

Home delivery of products has also taken on added importance during the pandemic. For food products, producers must guarantee the integrity and safety of the produce delivered to their customers. The problem of monitoring cold chain integrity throughout transport is therefore a significant challenge. Thanks to a new printable homopolymer developed in partnership with Laval University, INO is now able to print low-cost temperature sensors that are not sensitive to moisture. This new material makes possible absolute temperature sensor calibration, and when lightly doped with a glycerol, also provides for relative humidity measurement. This solution, which will be incorporated into future packaging, is more environment friendly.

PERSONAL SECURITY

INO was already working to enhance the security and flow of people in airports through detection and identification of threats hidden under clothing using a terahertz (THz) high-res close search system. In times of pandemic, a non-contact search is not only less invasive for passengers, but also protects security personnel. In addition to the imminent delivery of a compact body search demonstrator unit, finalization of image reconstruction software is now the focus of attention. It delivers high-quality images to facilitate automatic recognition of objects by artificial intelligence. The year has also seen other significant advances in terms of source coherence control, migration toward a higher resolution imager, the addition of selective frequency absorbers, and higher performing lenses. INO has also established commercial relations with two private companies for the development and supply of THz sources, and has put in place two collaborations with national standardization centres for perfecting THz calibration protocols.

Lastly, a number of intellectual property declarations, regarding UV sterilization of large areas, are being analyzed for potential business relevance. A new strategic orientation concerning remote measurement of vital signs of individuals in a crowd was formally added to our remote detection subsidiary, and two collaborative efforts with Laval University (pain) and University of Toronto (oximetry) were added to ongoing ones with LOEX (skin properties).

SUSTAINABLE DEVELOPMENT AND CLIMATE CHANGE

Another universally recognized major challenge concerns sustainable development. It aims at preserving the ecosystems that maintain life while stimulating an innovative, prosperous and responsible economy. INO is contributing to this important collective effort by fostering new industrial monitoring, operating, and production technologies.

In particular, INO is attacking the problem of monitoring fugitive emissions of volatile organic compounds (VOCs), such as methane and benzene associated with petroleum and petrochemical industry activities. In the case of methane, it involves local, real-time surveillance of leaks around heavy oil production site storage areas. The differentiating element of the approach developed in partnership with Carleton University is simultaneous measurement of concentration and flow rate of the gas from a single, non-invasive instrument. The results of tests of the device indicate that the accuracy and speed measurement are limited by temperature excursions. Research on the causes is ongoing. The primary objective for the benzene sensor was achieved this year, and it was demonstrated in laboratory that the device achieves a detection limit of 10 parts per billion in less than the 30 seconds required by regulation.

Underground pipes (sewers, water lines, culverts, etc.) are critical infrastructure that require much investment to maintain and replace them. INO develops solutions that allow service companies to reduce their operating costs, and infrastructure managers to obtain more information to enable them to make better decisions with regard to the replacement or extension of their useful life. This year, INO added an adapted intelligent colour camera to our 3D sensor capable of creating a digital twin inside a pipe. These two devices simultaneously allow detailing of pipe characteristics, such as diameter, ovalization and slope, and from the data collected, development of AI algorithms to automate the video inspection currently done manually.

On a different note, early detection of forest fires is another worthy environmental challenge. Fires regularly ravage a significant amount of territory and force the evacuation of many inhabitants. INO was involved in the Canadian Space Agency and the Canadian Fire Service (CFS) WildFireSat satellite mission, working with CFS scientists to experimentally establish a favourable comparison of the ability of mid-wavelength and near-infrared imagers to estimate the radiative power emitted by a forest fire.

Lastly, INO received an initial offer to purchase our lidar AeroMap product to control fugitive dust emissions in industrial settings. The system now incorporates a weather station and periodic sampler with the lidar. The solution represents the concentration of fine particulates less that 2.5 microns in diameter in an area of 10,000 m^2, in less than 10 seconds.

ECONOMIC RECOVERY AND EMERGENCE OF NEW SOLUTIONS

Fortified with renewed agreements with our governmental partners, INO is now better positioned than ever to contribute to the economic recovery as we emerge from this pandemic.

Our developments in robotic vegetable harvesting, sewer pipe virtualization, and autonomous navigation under difficult conditions can now benefit from Internet of Things (IoT) structuring. From acquisition cards, modular communication, annotation and cloud storage, upcoming systems will have access to a vault of algorithmic solutions based on reconfigurable AI to recognize attributes in video streams in near real time. In order for such algorithms to be efficient, large quantities of data must be individually annotated, taking the reality of the terrain in which they are emitted into account. Faced with the magnitude of this task, the ability to annotate data automatically using AI is becoming increasingly valuable and ever more important in system design. The next step in boosting system performance is to add an AI module dedicated to automatic data annotation. This new platform lends itself to a new business model for INO by adding value from cloud storage of data from our sensors, a use-based billable service.

At INO, we are also reinventing ourselves in specialized fiber optics. The interest generated by our new family of fibers dedicated to the development of ultrafast lasers has nearly doubled total sales this year and is proof or our ability to meet market needs. The team is currently focused on developing high-power lasers and, last year alone, achieved a jump of 200 W to more than 2,000 W of power by controlling intermodal thermal instabilities. Our efforts in coherent beam combination will lead to sources of over 10 or more kW over the coming years.

FIVE YEAR SUMMARY

Fiscal year 2020-2021 also marks the end of INO's 2016-2021 five-year plan. A number of successes in fiscal 2020-2021 alone, based on our organization's technology assets, are representative of the diversified contribution of high-quality technology solutions from INO over these five years:

- One spin-off company, Flyscan, completed a multimillion-dollar funding round, including $1M from Enbridge to support the development of technology to improve the security of energy transport infrastructure; in this case an airborne lidar solution for early detection of pipeline leaks.
- Thanks to Intellijoint Surgical Inc.'s "simple and elegant product" (in the words of the company's president), developed in conjunction with INO for hip arthroplasty that improves the life of patients and facilitates the surgeon's task, the company "reigns" at the top of the Deloitte Fast 50 category in 2020 for its fast rate of growth and technology leadership. The equipment it markets was used in a 20,000th hip replacement, thereby contributing to a better quality of life for an impressive number of patients.

- LaserAg won the 2020 Indigo Carbon Challenge with its turnkey analyzer for quantifying the amount of carbon sequestered in soil. Its LaserAG instrument – codeveloped and industrialized with INO – measures 15 critical parameters in soil samples in one minute using laser-plasma (LIBS) spectroscopy. This recognition illustrates the role precision farming can play in the fight against climate change.
- Our spin-off company, RaySecur, received the prestigious Prism Award from SPIE for its MailSecur™ package inspection product. MailSecur™ was selected as the best innovation in optics and photonics in the Safety and Security technology category.
- Lastly, Pavemetrics Systems, a long-time partner launched by INO in 2008, is now assuming its full autonomy since INO finalized the complete transfer of the production of roadway imagers for virtualization of ruts and roadway maintenance planning assistance.

INO, AN ORGANIZATION

A KEY PLACE IN THE INNOVATION ECOSYSTEM

With our strategic role in the worlds of academic research and industry, INO has transformed itself over the intervening years from a reference in optics to a centre of applied multidisciplinary expertise for challenges and problems encountered in the field.

Technology and in-the-field expertise.

IN UNION THERE IS STRENGTH

INO shines by virtue of the optics and photonics expertise of our multi-disciplinary teams and the complementary expertise we have built up over the years. This unparalleled combination enables INO to partner with our clients in their R&D projects and development of optimal solutions until the desired manufacturable result is attained.

Multidisciplinary expertise available on demand.

THE ABILITY TO INNOVATE

From the outset, INO has developed innovative solutions for a large number of industrial sectors. Our in-depth knowledge of our clients' challenges and problems, combined with over 30 years of apprenticeships and mastery of cutting-edge technologies, INO is accelerating the innovation development cycle and providing our clients with new competitive advantages.

Constant transformation.

DELIVERING INNOVATION

INO delivers innovation to promote the deployment and commercialization of our clients' solutions. Our industrialization service begins with our clients' ideas, develops pilot units, scales them up, and even starts ups a small production line. This real boost helps our clients speed up the time-to-market of their competitive solutions while giving them the time to plan their large-scale production, coached by INO.

Industrialization and scale-up.

THE CLIENT IS THE FOCUS OF OUR ACTIONS

It is with this constant concern in mind that INO developed a simple and structured five-step partnering process to guide our clients in search of a tailor-made solution.

A simplified structured process.

A CREATOR OF COMPANIES

Through 75 technology transfers and the spin-off of enterprises based on our solutions, INO has created 35 new companies that provide over 2,000 high quality jobs and contribute to enhancing Quebec and Canadian industrial competitivity thanks to their internationally exported innovative products.

A boost to the national economy.

THAT STANDS OUT

A STRUCTURED AND SIMPLIFIED PROCESS

NEEDS ANALYSIS

To obtain a mutual and detailed understanding of the problem to be solved.

SOLUTION CONCEPT

A schematic approach to a solution that will achieve the desired performance and identify and minimize risks.

PROOF OF CONCEPT

To identify and test measures for minimizing/ eliminating technical hurdles and end up on the attainable performance envelope.

DEVELOPMENT AND VALIDATION

To realize an industrialized solution that achieves the desired performances.

PRODUCTION – SCALING UP

To lead to the deployment of a commercial-scale production unit and ensure the economic viability of the solution.

FROM IDEA TO IMPACT THROUGH INDUSTRIAL INNOVATION

As is the case with countries like South Korea, Germany and Sweden – with increasingly develop fully-industrialized, reliable and economically viable products from basic or applied research – Canada has a host of Research and Technology Organizations (RTOs), including INO. Transforming university knowledge, concepts and patents as quickly as possible into industrialized solutions that generate value is precisely the key role that INO and other Canadian RTOs play in the innovation chain.

INNOVATING AT INDUSTRIAL SPEED

In Quebec, COREM, CRIM, FPInnovations and INO are allies of the entrepreneurs and public decision makers in using science and technology as profitably as possible for the economy. These innovating organizations, as well as other Canadian RTOs, like BioFoodTech, InnoTech Alberta, the National Research Council Canada, RPC, and the Saskatchewan Research Council, are accelerating the industrialization of knowledge, thereby responding to the immediate innovation needs of companies to generate rapid benefits and increase their competitiveness on world markets.

Investing in the development of these centres specialized in industrial innovation and bridging the academic and industrial worlds is a strategic choice for producing direct, rapid and significant benefits for Canadian entrepreneurs and workers.

WHEN INDUSTRIAL AND MANUFACTURING INNOVATION INVESTMENT FLOWS, THE ECONOMY GROWS.

SOME OF OUR ACHIEVEMENTS

MAKING LIFE EASIER FOR FARMERS AND MILLS

BinSentry specializes in logistics solutions using advanced Internet of Things (IoT) sensors. The company wanted to offer a new 3D sensor connected to farmers' feed bins. The sensor would accurately detect the fill level of the bins to help farmers order the right amount of feed at the right time, and allow feed mills to produce the right amount of feed and plan for efficient and well-timed delivery. As machine vision based on 3D sensors is a cutting-edge technology, BinSentry wanted an experts' point of view and assistance to go further with their idea.

When BinSentry and INO started working together, the INO team demonstrated the use of a time-of-flight camera module for collecting 3D profile measurements relevant to BinSentry's use case, including experiments in feed bins in the field with an initial prototype. INO then worked with BinSentry to implement a hardware solution capable of meeting the required specifications while partnering with BinSentry to develop data processing algorithms to convert camera data to 3D feed depth profiles.

Now, Binsentry offers a technology to accurately detect the fill level of farmer's feed bins, one step ahead of anyone else in the world sensing feed inside bins.

The solar-powered sensor, installed at the top of the bin, can provide uninterrupted service for years. Data is sent to the feed mill via cellular networks. An online tool allows farmers to monitor their feed bins more easily and accurately. Results are already very impressive, and BinSentry plans to introduct additional machine vision sensors in the near future.

" INO has been very professional throughout the entire process. There were times when we were not sure what we wanted to do, however INO was patient with us. At one point we changed course quite substantially which changed how INO was involved but INO continued to offer the same quality of advice and service. "

Nathan Hoel, CTO & Co-Founder of BinSentry

Why did BinSentry choose INO? We are experts in machine vision with a solid track record of supporting industrial partners with new technologies, and we are also a Canadian company like them. Our partnership is not over! As BinSentry considers additional versions of the machine vision sensor, it is counting on INO's help!

A PARTNERSHIP TO SOLVE CHALLENGES IN THE AGRI-FOOD INDUSTRY

"INO has exceeded our expectations in delivering on all aspects of the robotic cucumber harvesting project and we're eager to see what the future of the collaboration holds. The team at INO has been both friendly and professional, and despite the physical distance between us, there is a sincere feeling of unity in working together towards a common goal."

Brian Lynch, Research Scientist, Field Robotics for Vineland Research and Innovation Centre

Vineland Research and Innovation Centre (Vineland) is an Ontario-based research and innovation centre, dedicated to horticultural science. It had in mind a robotic cucumber harvesting project and they needed a customized imaging system. As optics, photonics and imaging systems are not in their scope of core expertise, they needed a partner with a wealth of knowledge and experience in that specific field of engineering.

INO and Vineland have already worked together for a mushroom harvesting solution, where INO has designed, produced, calibrated and delivered three generations of laser-pointing systems for guided mushroom harvesting. So, it was a natural fit to work together again for a new robotic harvesting solution to help Canadian greenhouse cucumber growers to be more efficient and productive while offering relief from labour shortages. They needed a multimodal imaging sensor to improve the detection capability of this system and the challenge was to filter over a narrow bandwidth while maintaining a good uniformity over a wide field of view. For this ongoing project, INO has designed, produced, and calibrated a fused 3D, visible, and multi-spectral imaging system for cucumber harvesting.

Although the project has yet to be completed, we are working closely to ensure methods and materials used result in a prototype aligned to have soon a market ready robotic harvesting system that is cost effective.

This collaboration allowed Vineland to resolve those problems faster and with more effective processes that they would have if it had not been for this collaboration (such as camera calibration, optics component selection, computer and electronics integration, etc.). This project will definitively help Vineland to expand the prototype's applicability to other areas of horticulture, agriculture and even different industries.

Vineland, who wanted to work with a Canadian company, was already aware of INO's reputation for providing effective solutions for imaging and our reputation for generating high-quality work. As soon as the work began for the first project, we each appreciated that both organizations were working on bringing concepts from an idea to a working prototype and the synergy was there from the beginning. With a great collaboration between both companies for years now, we can say it was a professional match made in heaven!

quantino

THE HIGH-TECH BUSINESS INCUBATOR PROPELLED BY INO TAKES FLIGHT

On October 15, 2020, Quantino – the high-tech business incubator for optics, photonics, quantum physics and hardware – opened its doors to innovating companies that would revolutionize today's industries to become the industries of tomorrow.

Quantino provides unique infrastructure and a wide range of services designed to support entrepreneurs in achieving commercial success for their companies. Over 17,000 ft² of work space, including six new cutting edge laboratories, are housed in INO's home offices in Quebec City. On March 31, 2021, six companies were accepted and three were installed in the premises.

Thanks to a world-class innovation environment, the latest in equipment, first-rate partners, and seasoned experts who will coach the incubated companies, Quantino will contribute to the development of an economy that is innovative, visionary and competitive on the international stage.

VIRTUAL VISIT TO QUANTINO!

ABCDUST

ABCDust is the first company to have benefitted from Quantino services. This globally-involved company develops intelligent and sustainable solutions for fugitive dust control and soil stabilization. Concerned about health and safety, water shortages and climate change, ABCDust created high-performance ecological additives and dust capture devices integrated into a management system that optimizes the entire fugitive dust control process in a variety of settings. ABCDust is thoroughly involved in the mining industry in Chile and Peru, and works with INO to market its technology in North America by incorporating optic, photonic, quantum physics and AI aspects, and developing new innovative and sustainable technologies and solutions.

LUX AEROBOT

The second company incubated in Quantino is Lux Aerobot, a Quebec enterprise that developed decision-making tools using aerial images acquired by their high-altitude balloons. In particular, Lux Aerobot's decision-making tools made their reputation while helping fight forest fires in Australia. Their stratospheric balloons located fires in real time to anticipate their evolution and put in place the best strategies to fight them. Through its partnership with Quantino, Lux Aerobot plans to remain on the cutting edge of technological advances in the field of optics to meet future demands more successfully. Lux Aerobot eventually foresees that data acquired by its balloons might contribute to optimizing operations in several markets, including the agriculture and mining sectors. These data might also be used to improve our understanding of the earth's climate in order to adapt more effectively to climate change.

AYE3D

AYE3D designs monitors to display contents in three dimensions (3D) and without special glasses. Produced for professionals, the purpose of this display tool is to develop information on the screen in the most natural and comfortable manner. The monitor can be used in geomatics, simulation, training and medical imaging. AYE3D's partnership with Quantino is based on AYE3D's production and marketing needs. INO's expertise in optics is a major asset in observing the technological evolution of the markets that will soon be using AYE3D's monitors. Over the next five years, AYE3D plans to have its products sold in over 40 countries. The incubated company also sees its monitors eventually helping to reduce school drop-outs and democratize the field of sciences.

A TEAM THAT CONTRIBUTES TO ESSENTIAL NEEDS AND CHANGES LIVES

Centraide Québec et Chaudière-Appalaches

Alain Chandonnet, President and CEO of INO, and Co-Chair of the 2021 Centraide Québec et Chaudière-Appalaches campaign

During the most recent *Centraide Québec et Chaudière-Appalaches* funding campaign, INO personnel once again demonstrated their great generosity. The combined efforts of our employees resulted in record donations of $64,108 that will help over 200 regional community agencies pursue their missions.

This success also made INO the recipient of a Centraide Distinction Award in the **"Companies with over 150 Employees, Informatics and Technology Sector"**. Through this award, Centraide Québec et Chaudière-Appalaches acknowledges INO's outstanding participation rate and the size of the average employee donation. **Congratulations to the entire team!**

ALAIN CHANDONNET NAMED CO-CHAIR OF THE 2021 CAMPAGN

The 2021 Centraide Québec et Chaudières-Appalaches funding campaign will include **Alain Chandonnet**, President and CEO of INO, among the campaign's four co-chairs. He will be combining his strengths with those of **Olga Farman**, Managing Partner, Quebec City office of Norton Rose Fulbright, **Geneviève Fortier**, Chair of the Board, Chief Executive Officer of Promutuel Insurance, and **Jean St-Gelais**, Chair of the Board of Beneva.

From left to right in the photo: Alex Nadeau-Fiset, Centraide's Philanthropic Development Advisor, Alain Chandonnet, President and CEO of INO, and Isabelle Gagné, Human Resources Advisor at INO, and Chair of the funding campaign.

COMMITTEES AND ECOSYSTEM

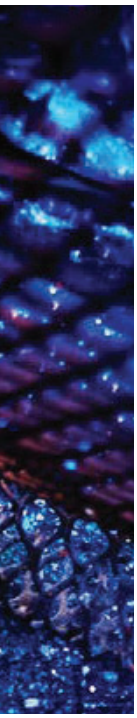
BOARD OF DIRECTORS

JACQUES TOPPING [4*]
Corporate Director
Board Chair

KATHY BAIG [3]
President,
Ordre des ingénieurs du Québec

ALAIN CHANDONNET
President and CEO, INO

HÉLÈNE CHARTIER [3]
Executive Director,
QG100 Network



PAULE DE BLOIS [3]
President and CEO, Axelys

DENIS FAUBERT [3*, 4]
President and CEO, CARIC

FRANÇOIS GIROUX [2*,4]
President, Gentec

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

GUY LABERGE [2]
Corporate Director

JEAN-GUY PAQUET [1]
Corporate Director

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

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
Chief Operating Officer

PHILIPPE BOIVIN
Vice-President,
Corporate Affairs

LOUIS MARTEL
Vice-President,
Business Development
and Partnership

ANDRÉ FOUGÈRES
Vice-President,
Innovation and Technology

MARTIN LARRIVÉE
Vice-President,
Finance

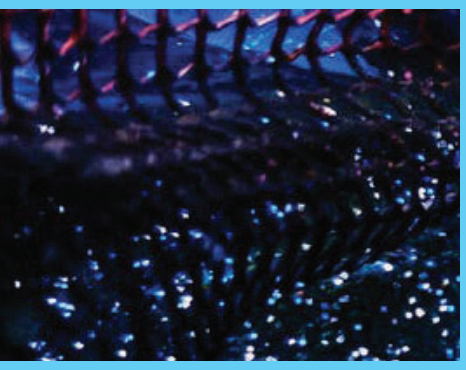
OUR MEMBERS

ASSOCIATE MEMBERS

- ABB
- Carleton University
- Celestica
- Coractive
- Exfo
- Gentec Electro-Optique
- LeddarTech
- Telops
- TeraXion
- Université Laval
- University of Ottawa

AFFILIATE MEMBERS

- Bell Canada
- Desjardins Entreprises – Québec-Capitale



RESEARCH AND DEVELOPMENT ADVISORY COMMITTEE

The Research and Development Advisory Committee advises INO on strategic scientific planning in light of the changing needs of Canadian businesses.

RICHARD BOUDREAULT
Committee Chair
Orbite Aluminae,
Saint-Laurent (Quebec)

MICHEL ARSENAULT
PARI-CNRC
Quebec City (Quebec)

EUGENE G. ARTHURS
SPIE
Bellingham (WA, United States)

ALAIN CHANDONNET
INO
Quebec City (Quebec)

SYLVAIN CHARBONNEAU
University of Ottawa
Ottawa (Ontario)

ANDRÉ FOUGÈRES
INO
Quebec City (Quebec)

JEAN GIROUX
TELOPS inc.
Quebec City (Quebec)

JEAN MAHEUX
RDDC-Valcartier
Quebec City (Québec)

RAPHAËL DESBIENS
ABB
Québec City (Québec)

MARTIN MALTAIS
UQAR
Lévis (Quebec)

MICHEL PICHÉ
Centre d'optique,
photonique et laser (COPL),
Québec City (Québec)

RUTH RAYMAN
National Research Council
of Canada (NRCC)
Ottawa (Ontario)

MICHAEL SCHMIDT
Friedrich-Alexander
Universität
Erlangen-Nürnberg
(Allemagne)

BRIAN C. WILSON
University Health Network
Toronto (Ontario)

ASSOCIATE RESEARCHERS

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

FRANCOIS BLANCHARD
École de technologie supérieure (ÉTS)

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

FRÉDÉRIC LEBLOND
Polytechnique Montréal

MARIO LECLERC
Université Laval

OZZY MERMUT
York University

PATRICK ROCHETTE
Université Laval,
Hôpital du Saint-Sacrement

STÉPHANE PERRON
Université de Montréal

MICHEL PICHÉ
Université Laval

CHRISTOPHE PY
National Research Council of Canada

RUTH RAYMAN
National Research Council of Canada

ÉTIENNE ROBERT
Polytechnique Montréal

GILLES ROY
R&D for Defence Canada

MANOJ SACHDEV
University of Waterloo

MICHAEL SCHMIT
SAOT, University Erlangen, Germany

NATHALIE TURGEON
Université Laval

RÉAL VALLÉE
Université Laval

BRIAN WILSON
University of Health Network

WILLIAM WONG
University of Waterloo

MARIIA ZHULDYBINA
École de technologie supérieure (ÉTS)

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

ENTREPRISE DANS LE DOMAINE DE L'ENVIRONNEMENT (CONFIDENTIEL), 2010

SYSTÈMES PAVEMETRICS, 2009
Machine vision systems for the inspection of transportation infrastructures

TECHNOLOGIES REALTRAFFIC, 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

OPTOSÉCURITÉ, 2004
Optical correlator

PYROPHOTONICS LASERS, 2004
PEFI laser technology

CYBIOCARE, 2003
Hypoglycemia monitor and glucose meter

TECHNOLOGIES OBZERV, 2002
Vision systems

NEKS TECHNOLOGIES, 2001
Colour-based gingival tartar detection

TERAXION, 2000
Optical network components

CORACTIVE HIGH-TECH, 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 AVIONIQUE, 1993
Optoelectronics consulting

I/FO TECHNOLOGIES, 1993
Fiber optic technology consulting

OPTEL VISION, 1992
Optical instrumentation

INSTUMENTS RÉGENT, 1990
Optical instrumentation

NORTECH FIBRONIC, 1989
Optical instrumentation

TECHNOLOGY TRANSFERS

ABB
Pyramid wavefront sensor

AMERICAN COMPANY
Diamond marking

AMERICAN COMPANY
Auto-centering technology

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 HIGH-TECH
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

INDUSTRIES MAIBEC
Feature detection of cedarwood shingles

INSTRUMENTS RÉGENT
Optical instrumentation

IOMNISCIENT
Classification module

IRPHOTONICS
Fluoride fibers

KRISPY KERNELS
Hyperspectral vision system for quality contro

LASIRIS
Diffractive optical elements

LEDDARTECH
LEDs for distance detection and measurement

LYNX INSPECTION
3D imaging system

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

TECHNOLOGY TRANSFERS

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
Bolometers

PYROPHOTONICS LASERS
PyFl fibre laser unfolded cavity configuration
PEFl laser technology

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

QUANTUM BIOMEDICAL (QBM)
Endoscope for intravascular diagnosis

RAYSECUR
Terahertz technology

REALTRAFFIC TECHNOLOGIES
Image analysis

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

VINELAND
Multi-modal imaging sensor for greenhouse cucumber harvesting

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, 2021
- 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

are derived from the audited financial statements of National Optics Institute as at and for the year ended March 31, 2021 (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

On our report dated June 30, 2021, we have issued an unmodified opinion on the audited financial statements for the year ended March 31, 2021.

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.*

KPMG LLP*

Québec, Canada, June 30, 2021

*CPA auditor, CA, public accountancy permit No A125181

SUMMARY STATEMENT OF FINANCIAL POSITION

March 31, 2021, with comparative information for 2020.

	2021	2020
ASSETS		
CURRENT ASSETS	**$**	**$**
Cash and cash equivalents	**77,843,372**	1,638,799
Accounts receivable	**3,498,796**	4,578,671
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))	**2,453,637**	1,775,523
Financial support receivable related to the entrepreneurship assistance program (note 2(c))	**—**	125,000
Inventories	**1,119,091**	636,812
Research contracts in progress	**1,655,423**	632,623
Prepaid expenses	**586,789**	742,960
Current portion of investments	**4,397,052**	4,404,305
	92,554,160	14,534,693
Investments	**4,478,818**	8,762,280
Investments in private companies	**925,504**	229,233
Tangible capital assets	**28,721,303**	25,394,303
Intangible assets	**468,835**	322,376
	127,148,620	49,242,885
LIABILITIES AND NET ASSETS		
CURRENT LIABILITIES		
Bank loans	**—**	1,360,491
Accounts payable and accrued liabilities	**10,196,468**	6,728,061
Deferred revenues and deposits on contracts	**1,218,578**	584,634
Current portion of long-term debt	**655,311**	472,349
Deferred financial support related to additional financial support program (note 2(a)(ii))	**13,641,883**	5,000,000
	25,712,240	14,145,535
Long-term debt	**1,712,890**	1,577,678
Employee future benefit obligations	**2,675,358**	5,558,283
Deferred financial support related to tangible capital assets and intangible assets (note 2(b))	**39,509,693**	17,929,301
Deferred financial support related to additional financial support program (note 2(a)(ii)	**46,300,000**	6,775,209
	115,910,181	45,986,006
NET ASSETS	**11,238,439**	3,256,879
	$ 127,148,620	$ 49,242,885

See accompanying notes to summary financial statements.

On behalf of the Board:

, Director

, Director

SUMMARY STATEMENT OF OPERATIONS

March 31, 2021, with comparative information for 2020.

	2021	2020
	$	$
REVENUES		
Financial support related to internal research program (note 2(a))	**23,400,000**	22,400,000
Financial support related to tangible capital assets and intangible assets (note 2(b))	**1,909,032**	1,948,319
Financial support related to the entrepreneurship assistance program (note 2(c))	**442,877**	125,000
Sales and contracts	**15,410,671**	18,052,364
Royalties	**231,089**	117,902
Dividend income	**658,950**	1,109,350
Rent and other revenues	**198,446**	121,421
Members' contributions	**31,000**	50,000
	42,282,065	43,924,356
EXPENSES		
Salaries and fringe benefits	**24,323,989**	23,265,096
Cost of goods and services pertaining to project completion	**5,689,896**	8,076,328
Other operating expenses	**7,163,014**	8,618,861
Foreign exchange loss	**290,484**	42,484
Other than temporary decline in value on investments in private companies	**232,090**	—
Interest on long-term debt	**81,501**	94,727
Interest and bank charges	**124,017**	99,501
Depreciation of tangible capital assets	**2,797,248**	2,778,383
Amortization of intangible assets	**184,481**	148,469
	40,886,720	43,123,849
OTHER REVENUES		
Canada Emergency Wage subsidy	**3,827,615**	—
EXCESS OF REVENUES OVER EXPENSES FOR THE YEAR	**$ 5,222,960**	$ 800,507

See accompanying notes to summary financial statements.

SUMMARY STATEMENT OF CHANGES IN NET ASSETS

March 31, 2021, with comparative information for 2020.

	2021	2020
	$	$
NET ASSETS, BEGINNING OF YEAR	**3,256,879**	5,168,272
Excess of revenues over expenses for the year	**5,222,960**	800,507
	8,479,839	5,968,779
Remeasurements and other items (note 3)	**2,758,600**	(2,711,900)
NET ASSETS, END OF YEAR	**$ 11,238,439**	$ 3,256,879

See accompanying notes to summary financial statements.

SUMMARY STATEMENT OF CASH FLOWS

March 31, 2021, with comparative information for 2020.

	2021	2020
CASH PROVIDED BY (USED IN)	**$**	**$**
OPERATING		
Excess of revenues over expenses for the year	**5,222,960**	800,507
Items not involving cash:		
Depreciation of tangible capital assets	**2,797,248**	2,778,383
Amortization of intangible assets	**184,481**	148,469
Amortization of premiums and discounts on coupons and bonds	**10,415**	47,398
Adjustment related to employee future benefits	**(124,325)**	8,148
Financial support related to tangible capital assets and intangible assets (note 2(b))	**(1,909,032)**	(1,948,319)
Deferred financial support recognized in revenues (note 2(a))	**(7,000,000)**	(6,000,000)
Other than temporary decline in value on investments in private companies	**232,090**	—
Changes in non-cash working capital items	**1,836,285**	(833,853)
	1,250,122	(4,999,267)
FINANCING		
Net change in bank loans	**(1,360,491)**	1,197,723
Increase in long-term debt	**865,811**	—
Repayment of long-term debt	**(547,637)**	(472,350)
Investment income generated related to deferred financial support (note 2(a))	**166,674**	353,992
Financial support used (note 2(a))	**3,004,982**	2,381,868
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**	—
	77,129,339	3,461,233
INVESTING		
Acquisitions of tangible capital assets	**(6,124,248)**	(3,291,754)
Acquisitions of intangible assets	**(330,940)**	(115,991)
Acquisition of a term deposit	**(100,000)**	—
Disposal of a term deposit	**100,000**	100,000
Acquisitions of investments	**—**	(1,621,812)
Disposals of investments	**4,280,300**	4,794,697
	(2,174,888)	(134,860)
Net increase (decrease) in cash and cash equivalents during the year	**76,204,573**	(1,672,894)
Cash and cash equivalents, beginning of year	**1,638,799**	3,311,693
CASH AND CASH EQUIVALENTS, END OF YEAR	**$ 77,843,372**	$ 1,638,799

See accompanying notes to summary financial statements.

NOTES TO SUMMARY FINANCIAL STATEMENTS

Year ended March 31, 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:

			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	$ 50,000,000	$ 23,400,000

2. FINANCIAL SUPPORT (CONTINUED)

a – Financial support - Internal Research Program (continued):

			2020
	Total support	Remaining support balance available as at March 31, 2021	Revenues
Government of Canada Canada Economic Development	$ 50,000,000	$ 10,000,000	$ 10,000,000
Government of Québec	57,000,000	17,400,000	12,400,000
Financial support Internal research program	$ 107,000,000	$ 27,400,000	$ 22,400,000

i) Government of Canada

In August 2016, 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, 2021, for its Internal Research Program. As at March 31, 2021, the total amount receivable is $1,000,000 (2020 - nil). The agreement with Canada Economic Development which will replace this agreement is described in Note 4.

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 $7,000,000 was used during the year ended March 31, 2021 (2020 - $6,000,000).

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.

Deferred financial support under the Internal Research Program is as follows:

	2021	2020
Balance, beginning of year	**$ 11,775,209**	$ 17,421,217
Financial support - Internal Research Program	**55,000,000**	—
Investment income generated	**166,674**	353,992
Amount recognized in revenues during the year		(6,000,000)
	59,941,883	11,775,209
Less: current portion	**13,641,883**	5,000,000
BALANCE, END OF YEAR	**$ 46,300,000**	$ 6,775,209

2. FINANCIAL SUPPORT (CONTINUED)

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 equipement. As at March 31, 2021, a balance of $399,281 was receivable (2020 - $1,775,523).

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, 2021, a balance of $548,259 was receivable (2020 - $204,800 received in advance).

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, 2021, a balance of $1,369,625 was receivable.

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.

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

	2021	2020
Balance, beginning of year	**$ 17,929,301**	$ 17,170,173
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	**3,489,424**	2,707,447
Transfer to revenues to offset the corresponding depreciation and amortization	**(1,909,032)**	(1,948,319)
BALANCE, END OF YEAR	**$ 39,509,693**	$ 17,929,301

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, 2022 to support assistance activities for start-up entities. As at March 31, 2021, an amount of $125,000 had been received in advance (2020 - $125,000 was receivable).

ii) In March 2020, the Québec City 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, 2021 and 2020, the amount receivable is nil.

2. FINANCIAL SUPPORT (CONTINUED)

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 ending March 31, 2022 to support the completion of an industrial research program in quantum photonics. As at March 31, 2021, a balance of $186,000 had been received in advance (2020 - nil).

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, 2021. The funded status of the defined benefit plans is as follows:

	2021	2020
Defined benefit obligations	**$ (48,666,700)**	$ (46,729,900)
Fair value of plan assets	**46,486,500**	41,705,900
	$ (2,180,200)	$ (5,024,000)

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 year ended March 31, 2021 (2020 - increase of $125,518).

As at March 31, 2021, the employee future benefit obligations were as follows:

	2021	2020
Defined benefit pension plan	**$ 2,180,200**	$ 5,024,000
Other employee future benefits	**495,158**	534,283
	$ 2,675,358	$ 5,558,283

Remeasurements and other items of $2,758,600 (2020 - ($2,711,900)) have been allocated directly to net assets.

4. SUBSEQUENT EVENT

As at the date of the report, the Government of Canada, through the Business and Regional Growth Program of Canada Economic Development, disclosed its intention to grant INO financial support of up to $55,000,000 over five years for its Internal Research Program and to finance the acquisition of equipment. This agreement is subject to the final approval by Canada Economic Development which has not yet been given.

SHEDDING LIGHT ENVIRONMENT **SHEDDING LIGHT** NATURAL RESOURCES **SHEDDING LIGHT** ENERGY **SHEDDING LIGHT** INFRASTRUCTURE **SHEDDING LIGHT** FOOD AND AGRICULTURE **SHEDDING LIGHT** AEROSPACE **SHEDDING LIGHT** AERONAUTICS **SHEDDING LIGHT** PHARMACEUTICAL INDUSTRY **SHEDDING LIGHT** DEFENCE SECURITY **SHEDDING LIGHT** MEDICAL DEVICES **SHEDDING LIGHT** ENVIRONMENT **SHEDDING LIGHT** NATURAL RESOURCES **SHEDDING LIGHT** ENERGY **SHEDDING LIGHT** INFRASTRUCTURE **SHEDDING LIGHT** FOOD AND AGRICULTURE **SHEDDING LIGHT** AEROSPACE **SHEDDING LIGHT** AERONAUTICS **SHEDDING LIGHT** PHARMACEUTICAL INDUSTRY **SHEDDING LIGHT** DEFENCE SECURITY **SHEDDING LIGHT** MEDICAL DEVICES **SHEDDING LIGHT** ENVIRONMENT **SHEDDING LIGHT** NATURAL RESOURCES **SHEDDING LIGHT** ENERGY **SHEDDING LIGHT** INFRASTRUCTURE **SHEDDING LIGHT** FOOD AND AGRICULTURE **SHEDDING LIGHT** AEROSPACE **SHEDDING LIGHT** AERONAUTICS **SHEDDING LIGHT** PHARMACEUTICAL INDUSTRY **SHEDDING LIGHT** DEFENCE SECURITY **SHEDDING LIGHT** MEDICAL DEVICES

2740 EINSTEIN STREET
QUEBEC CITY (QC) G1P 4S4
CANADA

1-866-657-7406

INFO@INO.CA