



HARNESSING THE POWER OF LIGHT: TO PROPEL HUMANITY FORWARD

UNESCO has proclaimed 2015 the "International Year of Light." The goal is to raise awareness worldwide of the important role light plays in our everyday lives and the technologies (such as optics) associated with it. It is also an opportunity to highlight science's potential as a source of innovation, employment, and economic vitality. INO uses the multiple properties of light to model matter and adapt it to the needs of industry in a world where agility and innovation are the key drivers of growth. TI INO_ANNUALREPORT_2015



YEAF OF O (R &D Transi

\$ 14.8 M	20 05/06
\$ 13.7 M	20 06/07
\$ 13.4 M	20 07/08
\$ 13.1 M	20 08/09
\$ 14.7 M	20 09/10
\$ 12.1 M	201 0/11
\$ 17.1 M	2011/1 2
\$ 15.0 M	201 2/13
\$ 13.7 M	201 3/14
\$ 16.4 M	2014/15

YEAR-TO-YEAR BREAKDOWN OF OUTSIDE REVENUES (R &D contracts + Sales + Transfer counterparts + Royalties)

(%)



OUTSIDE REVENUES BREAKDOWN BY COUNTRY/ CONTINENT (%)



OPERATION REVENUES BREAKDOWN (%)

OUTSIDE INCOME 53.9%

canada irp*



resources



INO, A MODEL FOR R&D, ACCORDING TO PHILIPPE COUILLARD

On his trip to France, Quebec premier Philippe Couillard visited the Institut d'Optique d'Aquitaine, which was modeled after INO.

"Quebec and France work closely together on optics/photonics projects, a field in which Quebec is a leader."

Philippe Couillard, Quebec Premier BORDEAUX, France, March 5, 2015

INO, ECONOMIC CATALYST

"INO and its partners contribute over half a billion dollars to Canada's economy every year. Its activities generate a leverage effect of 1:10. Every dollar invested in INO represents ten dollars in economic growth. For each job created at INO, there are nine others created or retained throughout the Canadian economy, six of which are in Quebec."

The Honourable James Moore, Minister of Industry Canada QUEBEC CITY, Canada, December 1, 2014

INO 1ST IN CANADA FOR CREATION OF INNOVATION

According to a study of Canadian R&D specialists conducted by the Saskatchewan Research Council (SRC) in 2014, INO ranks number one in Canada for its ability to generate marketable innovation. Furthermore, INO ranks third in the nation with respect to the level of excellence in research performed in its laboratories.

INO RECOGNIZED FOR ITS SUCCESSES IN THE FIELD OF TECHNOLOGY COMMERCIALIZATION

The Canadian Advanced Technology Alliance, the largest high-tech association in Canada, presented INO with the Celestica Award in recognition of its successes in commercializing technologies developed in its laboratories. "Our award winners and finalists have each shown significant leadership as role models for the development of profitable businesses in Canada."

John Reid,

President and CEO, CATAAlliance OTTAWA, Canada, May 21, 2014

INO, 2014 WINNER OF GRAND PRIX QUÉBÉCOIS DE LA QUALITÉ

These annual awards are the highest honor conferred by the Quebec government on businesses deserving of special recognition for their management and overall performance.

"I congratulate the winners and the visionary men and women at their helm who apply the best business practices in all spheres of their operations and at all management levels."

Jacques Daoust,

Quebec Minister of the Economy, Innovation and Exports MONTREAL, Canada, November 13, 2014



CATAAlliance

de la qualité

The 2014–2015 fiscal year was very positive, both

MESSAGE TO MEMBERS

in terms of the volume and quality of business services and innovation activities, and in terms of the growth in outside earnings.

This year we posted \$16.4 million in outside earnings — \$2.7 million more than last year representing growth of 19% over 2013-2014. Our earnings break down as follows: \$11.2 million from R&D contracts, \$4.1 million from value-added prototype sales, and \$1.1 million from royalties and transfer considerations.

Other earnings included \$16.8 million invested in our internal research program and \$509,000 from other sources for a total of \$33.7 million in overall earnings.

This year, throughout all our operations, our scientific and technical teams carried out over 600 service contracts for clients in various areas of activity. Of our outside earnings from these contracts, 23% came from businesses and companies in transportation, 20% in health and life sciences, 18% in defense and public security, 18% in optics/photonics, 8% in industrial processes, 6% in the environment, 3% in aerospace, 2% in natural resources, and 2% in information and communications technology.

Small and medium-sized enterprises continue to make up the majority of our clientele. In 2014–2015, 61% of outside earnings came from SMEs, 13% from big business, 14% from government corporations, and 12% from universities.

The geographic distribution of outside earnings is as follows: 72% from within Canada, 13% from the United States, 11% from Asia, and 4% from Europe.

Almost 80% of the expenditures required to carry out these sales activities were made in Quebec and Canada.

INTELLECTUAL PROPERTY AND TECHNOLOGY TRANSFERS

INO's research and development investments allowed us to boost our scientific and technological capital with 19 new patents this year, with 11 granted in Canada, 7 in the United States, and 1 in Europe.

This brings the total number of patents acquired since INO's founding to 213. Our patent portfolio protects a broad range of technological innovations developed by our hard-working scientific and technical teams. A further 68 patent applications are currently pending.

We also completed a technology transfer with the Quebec company Autolog, a long-time INO partner. This transfer involved 3D sensor calibration and line extraction software. In addition, we signed an agreement in principle respecting Terahertz imaging technology with our entrepreneur-in-residence, whose company is slated for spinoff in the next fiscal vear.

Two new candidates were recently selected for the





Jean-Yves Roy President and CEO

• Thanks to the support of our government partners and the talent of our employees, INO has become a veritable driver of the knowledge economy in Canada.

Fagurt

Jean-Guy Paquet Chairman of the Board of Directors

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All the awards and distinctions INO received this year are thanks to the hard work of our employees. I am deeply proud of them. They truly embody the mission and values of the organization.



2014-15 ZESLILTS

Entrepreneur-in-Residence program, and their stints at INO should start in the next year. This program was launched in 2013 in conjunction with the City of Québec and the participation of Anges Québec.

DEVELOPMENT, ALLIANCES, AND COOPERATION

In terms of business development, strategic alliances, and cooperation, our teams were very active this year, both in Canada and abroad. These initiatives help give us a better understanding of industry's changing needs. They are in line with our strategic plan to transfer technology to businesses.

Initiatives:

- Deploy our Canadian expansion
- Bolster INO's presence in the United States
- Set up a complementary network of agents
- Do canvassing and get program managers involved in the business development process
- Demonstrate INO technology
- Give presentations and talks

Last year, INO began discussions with leading national companies on topics such as

- Establishing new advanced manufacturing capabilities in Canada
- Setting up a research consortium on pipeline integrity
- Link up with a company specialized in remotely operated vehicles
- Negotiating a framework agreement on Canada-wide cooperation in microfabrication and biophotonics

Moreover, INO's experience developing its biophotonics offerings in Ontario has demonstrated that close geographical and technical proximity to clients makes it easier for us to identify the innovation potential of optics/photonics and make our services available to the Ontario biomedical community. In 2014–2015, this led to significant growth in sales of services and also spurred diversification in applications. In the United States, INO held or participated in a number of trade missions, workshops, and presentations that brought together researchers, innovation management professionals, industry players, and business leaders in Connecticut, New York, Florida, Nevada, Texas, and Idaho. INO also continued its partnership activities with a major precision optics manufacturer and made new contacts with other big companies. A number of them have toured our facilities and taken the opportunity to discuss service contracts and technology transfers.

Fiscal 2014–2015 was also an opportunity to strengthen our international presence. In addition to taking part in more than 50 events—congresses, conferences, missions, and trade fairs in Asia, Europe, the United States, and elsewhere— INO also visited clients that we had targeted in Germany, France, the Czech Republic, and China.

In addition, we bolstered our business development network by recruiting two new agents in India and China. In Canada, we also hired a new agent to represent INO in the Maritimes.

INO HONORED FOR ITS MANAGEMENT AND ITS SUCCESSES IN THE FIELD OF COMMERCIALIZATION

In a study conducted by the Saskatchewan Research Council last year, INO was ranked number one by its peers for its ability to generate marketable innovation. Moreover, the Canadian Advanced Technology Alliance (the largest high-tech association in Canada) presented INO with the Celestica Award in recognition of its successes in commercializing technological innovations.

INO was also the proud recipient of the 2014 Grand Prix québécois de la qualité, the highest honor conferred by the Quebec government on businesses deserving of special recognition for their management and overall performance.



AN ESSENTIAL LINK IN THE INNOVATION CHAIN

The year ahead will be the occasion for us to approach our government partners about renewing our five-year financial support agreements for our Research and Development Program for Industrial Innovation. INO expects to deliver the projected results at the end of the current agreement with our partners.

For the 2011–2016 period, INO will have carried more than 5,000 contracts for businesses in Quebec and across Canada working in a variety of economic sectors, completed 23 technology transfers to existing companies or new businesses, and secured over 80 new patents. In addition INO will have maintained a self-financing rate of over 50% for this period.

Since its inception in 1988, INO has always hinged its work on supporting industry in Quebec and across Canada. Its track record of achievement reflects the effectiveness of its business model: 29 spinoff companies employing over 1,000 people, 58 technology transfers to existing companies, and thousands of contracts carried out on for Quebec and Canadian companies.

Having proven our ability to meet the needs of businesses for the past 26 years, we look to the future with confidence and determination. We will continue to leverage our technological innovations as we pursue our mission of helping even more companies in Quebec and the rest of Canada improve their market position. INO will also help Canada maintain its status as a world leader in optics/photonics.

In closing, we would like to offer our sincere thanks to each and every member of the INO staff. They are the ones who embody INO's mission and values. Their energy, commitment, and unique expertise are the reason for our success. We are very proud of our employees, particularly in such a difficult year where cuts in financial support from our government partners resulted in restructuring that, among other things, extended the work week from 37.5 hours to 40 hours.

We would also like to extend our thanks to the members of our board of directors, whose vast experience and thoughtful advice were invaluable throughout the year.

Fagurt

Jean-Guy Paquet Chairman of the Board of Directors

Quebec City, September 24, 2015

Jean-Yves Roy President and CEO

HANDYEM

Quebec City, Quebec

Having been directly involved in the creation of two INO spinoff companies, TeraXion and

handyem, I can personally attest to how important the center is for the region and the province of Quebec. Over the past 15 years, these two companies have together created over 200 top-quality direct jobs in high tech and generated combined revenues of over \$100 million, 95% of which are from exports.

Alain Chandonnet

President and CEO, handyem

handyem designs and fabricates an analytical instrument platform dedicated to life science researchers by coupling the fundamental principles of cytometry with revolutionary optical fiber microfluidic technology. Through its compact, affordable, and easy-to-use instruments, handyem is a young company whose multidisciplinary specialists are determined to make cytometry available to a broader audience.

THE CANARY SYSTEM

Quantum Dental Technologies, Toronto, Ontario



been able to get our CANARY system to market so quickly and easily without INO's help.

Quantum Dental Technologies (QDT), a company specialized in medical devices, has developed a unique system for dentists enabling the early detection of dental cavities.

TRANSCANADA. Calgary, Alberta

66 Thanks to its expertise, INO has become a key partner of our continuous improvement program in the area of pipeline safety and environmental protection.

> A leader in the responsible development of energy infrastructure, TransCanada constructs and operates natural gas and oil pipelines, power generation stations, and gas storage facilities across North America. Our natural gas transmission network, at over 68,500 kilometers, is one of the largest in North America, transporting some 20 percent of the continent's daily gas supply

LIBERTY SPRING Montmagny, Quebec

Thanks to INO, we have been able to develop an optical new part inspection system. When these parts leave our plant, there are no imperfections. A remarkable feat.

Richard Guimont President, Liberty Spring

Liberty Spring is a world leader in the production and distribution of precision high-tech springs for the auto industry. It produces close to 100 million springs annually for many of the biggest names in the auto industry-clients always on the lookout for the most effective technologies on the market.

STERIS

Quebec City, Quebec

We have been working with INO for over four years now. The organization helped us kick off development of an innovative new technology aimed at improving the process for decontaminating surgical instruments before reuse in hospitals, and is actively supporting our development of a new line of products that will eventually be manufactured at our Beauport facility.

Daniel Rochette Manager, New Product Development STERIS Corporation | IPT Engineering **CELESTICA** Toronto, Ontario

66 Together, Celestica and INO bridge the commercialization gap by brining clients' ideas to life as quickly as possible.

Based in Toronto, Celestica is a world leader in the development of innovative supply chain solutions.

REVIEW DE ACTIVITIES

The INO internal research program (IRP) is aimed at developing technologies adapted as needed to industry requirements to promote economic growth across Canada. To this end, INO must

- develop game-changing technologies that offer a distinct competitive edge in important markets;
- offer technologies with a sufficient level of maturity for industry use; and
- align technological developments with windows of opportunity and expected industry needs.

To properly identify, adjust, and select technology development projects and determine their specific objectives, timelines, and roadmaps requires a rigorous and dynamic iterative process and in-depth understanding of industries and their environments, challenges, and strategic objectives. Every industry —and each stakeholder in a given industry—has its own challenges and strategies. Nevertheless, the global business environment can shed light on major trends and priorities in society that are driving change in all industries:

- Sustainable development and safe distribution of energy resources
- Development of northern Quebec and the Arctic and sustainable development of natural resources
- Recovery in the manufacturing sector
- Maintenance of territorial sovereignty and security
- Cost containment in public health and well-being in the current demographic context
- Access to technology, including the Internet of Things and the trends toward greater mobility, camera proliferation, and self-monitoring

Many optics/photonics technologies can play a role in each of these areas, and a single technology can be a game-changer that provides a competitive edge for multiple solutions in a variety of fields. To better manage and coordinate roadmap development for all INO technologies, we have grouped them together by program.

Technical roadmaps are reviewed regularly to ensure they remain in line with our objectives and the technological developments themselves. This regular monitoring consists of internal reviews three times a year and biannual reviews by a committee of external experts. We also have to ensure a certain balance in terms of timelines for the various projects in our technology development portfolio. Any technologies that we developed in previous years and are still of interest to industry must be kept up-to-date. Considerable efforts must also be made to develop technologies that industry will need in the coming two to three years. In addition, INO must determine which technologies will be key in the long run and start laying out a strategy in these areas today.

Due to cuts in the technology development budget over the past two years and delays in the equipment acquisition program, we have had to focus on maintaining our core capabilities and essential areas of expertise. However, we have taken steps to develop technologies that will provide industry with competitive advantages in the less immediate future.

In *Microfabrication*, for example, we have put considerable effort into maintaining our expertise in microbolometers. Development has focused on reducing critical dimensions (to a 17 micron pixel) and extending the spectral range (THz), but process performance and robustness have been our primary concerns. At the same time, we have continued our work on projects initiated last year to develop heterogeneous assembly and packaging of silicon photonics. We have also identified and studied the field of micro-implants. In *Optical Design*, we have concentrated on establishing the applicability limits of INO's self-centering technology. We have also fine-tuned INO's expertise and tools in this field, specifically with regard to hybrid optics, generic surfaces (freeform optics), and mechanical design best practices to facilitate component subsystem sterilization.

In *Lasers and Specialty Optical Fibers,* we have upgraded our specialty optical fiber production equipment to improve process control and the quality of fibers produced. In the same vein, we have worked to industrialize the cleaving process for large optical fibers. A first rod-type fiber was also fabricated at INO. This type of fiber is needed to amplify high-energy short pulses.

- ACTIVITIE

Last year, the *Vision* program continued work on two existing platforms. AWARE is a program for positioning and tracking objects in outdoor environments, while VIRTUO uses a network of sensors to generate synthetic 3D images. For the AWARE platform, we have focused on developing algorithms compatible with mobile cameras and comparing the results obtained with those from the previous platform. For VIRTUO, we have developed extremely efficient installation and calibration protocols that have reduced installation time by a factor of 12 and boosted measurement precision by a factor of 3.

In Defense and Security, one of our focuses has been to adapt algorithms for processing images in the IR range in order to reduce the cost, weight, and size of cameras for a given image quality. A feasibility study on a THz package inspection system has guided the methods and approaches required to develop the application. A first foray into mobility has led to a proof of concept demonstrating the feasibility of IR camera applications for smartphones.

In *Biophotonics,* we have carried out an in vivo demonstration of the proximity probe operating in near infrared. In addition, we have initiated a project to develop a demonstration prototype of a hyperspectral fluorescence-lifetime imaging microscopy (FLIM) system for high-speed pharmaceutical screening.

In Environment, we have reviewed the design of the AeroMap Lidar system (for detecting particulate pollutants) since a major constituent has left the market. This redesign is an opportunity to boost the range and durability of the Lidar system. We have continued to develop the system to enable granulometry of aerosols and demonstrate the effectiveness and efficiency of the pyramid wavefront sensor.

In *Energy and Natural Resources*, we have found that systems for spreading sunlight increase microalgae growth in outdoor tanks by a factor of 2 to 3. Furthermore, the modular platform for taking 3D measurements has been completed, and the platform for hyperspectral measurements is also fully operational. In mining, we have demonstrated our granulometry capabilities by measuring the particle size of rocks as they were unloaded by dump trucks. Lastly, we have tested our voltage sensors at 14 kV for extended periods at temperatures ranging from -40°C to +50°C.





A Canadian pioneer in optics/photonics research since its inception, INO has built an enviable reputation on the international scene thanks to its technological breakthroughs and the development of innovative processes and applications integrating optics and photonics. INO innovations are in use all around the world.

MEMBERS



EX-OFFICIO MEMBERS

GOVERNMENT **OF QUEBEC** GOVERNMENT **OF CANADA**

AFFILIATE **MEMBERS**

BELL CANADA Verdun, Quebec

COMMUNICATIONS **RESEARCH CENTRE** CANADA Ottawa, Ontario

DESJARDINS GROUP Quebec, Quebec

INDUSTRIAL ALLIANCE Quebec, Quebec

THALES CANADA Saint-Laurent, Quebec

ASSOCIATE **MEMBERS**

ABB BOMEM Quebec, Quebec

B-CON ENGINEERING Nepean, Ontario

AIRBUS DEFENCE AND SPACE CANADA Ottawa, Ontario

CELESTICA INTERNATIONAL Toronto, Ontario

CORACTIVE HIGH-TECH Quebec, Quebec

EXFO Quebec, Quebec

FACULTY OF ENGINEERING AND DESIGN **CARLETON UNIVERSITY** Ottawa, Ontario

GENTEC ELECTRO-OPTICS Quebec, Quebec

LAVAL UNIVERSITY Quebec, Quebec

LEDDARTECH Quebec, Quebec

OBZERV TECHNOLOGIES Quebec, Quebec

TELOPS Quebec, Quebec

TERAXION Quebec, Quebec **NORTECH FIBRONIC** (Optical Instrumentation, 1989)

INSTRUMENTS REGENT (Optical Instrumentation, 1990)

OPTEL VISION (Optical Instrumentation, 1992)

AEREX AVIONIQUE (Optoelectronics Consulting, 1993)

I/FO TECHNOLOGIES (Fiber Optic Technology Consulting, 1993)

DORIC LENSES (Microlenses, 1994)

FISO TECHNOLOGIES (Fiber Optic Sensors, 1994)

OPTIWAVE CORPORATION (Integrated Optics Software, 1994)

P&P OPTICA (Optics Engineering Shop, 1995)

PIERRE LANGLOIS CONSULTANT (Diffractive Optics Consulting, 1997)

CORACTIVE HIGH-TECH (Specialty Fibers, 1998)

TERAXION (Optical Components, 2000)

NEKS TECHNOLOGIES (Color-Based Gingival Tartar Detection, 2001)

OBZERV TECHNOLOGIES (Vision Systems, 2002)

CYBIOCARE (Hypoglycemia Sensor and Glucose Measurement, 2003)

NEOPTIX

Sensors, 2004)

IRPHOTONICS (Fluoride Glass and Fibers, 2004)

(Fiber Optic Temperature

OPSENS (Fiber Sensors, 2004)

OPTOSECURITY (Optical Correlator, 2004)

PYROPHOTONICS LASERS (PEFL Laser Technology, 2004)

QUANTUM BIOMEDICAL (Endoscopic Probe for Intravascular Diagnosis, 2006)

OPTI RYTHMIX (Virtuo Library, 2011)

HEDZOPT (Thermal Weapon Sight, 2007)

LEDDARTECH (LEDs for Detection and Distance Measurement, 2007)

REALTRAFFIC **TECHNOLOGIES** (Image Analysis Technology, 2008)

PAVEMETRICS SYSTEMS (Machine Vision Systems for Transport Infrastructure Inspection, 2009)

COMPANY IN THE ENVIRONMENT DOMAIN (Confidential, 2010)

HANDYEM (Compact Cytometer, 2011)

TECHNOLOGIES AND SERVICES INN-OXX (LiDAR Measurement of Brasque Level, and Laser Triangulation Technology to Measure Truck Load Volume, 2013)



SLIMMARY FINANCIAL STATEMENTS MARCH 31, 2015

ARCANE TECHNOLOGIES (Computing Library – Amazone)

ASIAN ENTERPRISE (Terahertz Imaging)

ASIAN ENTERPRISE (Reading Circuit)

ASIAN ENTERPRISE (Bolometers)

ASIAN INTEGRATOR (MOPAW Laser)

ASIAN ENTERPRISE (Fiber Components)

ASIAN RESEARCH INSTITUTE (Bolometers)

AUTOLOG (3D Imaging Calibration Software)

AUTOLOG (Source Code)

AUTOLOG (Planovision)

AVENSIS/BRAGG PHOTONICS (All-Fiber Photo-Induced Filters)

BRIO CONSEILS (Development Process Management Innovation)

BRISTOL AEROSPACE (Infrared Detector)

CANADIAN ENTERPRISE (Bolometers)

COMMUNICATION **RESEARCH CENTER** (Integrated Processes System - SPI)

CORACTIVE HIGH-TECH (Triple-Clad Specialty Optical Fiber)

CTEX (Bolometers)

CYBIOCARE (Hypoglycemia Sensor and Glucose Measurement)

DELLUX TECHNOLOGIES (LED lights) **FISO TECHNOLOGIES**

(Fiber Optic Sensors for Temperature, Constraint and Pressure)

FISO TECHNOLOGIES (End-of-Service Indicator for Respiratory Protective Device)

GENTEC (Holographic Wave Sampler)

HANDYEM (Flow Cytometry)

HEDZOPT (Thermal Weapon Sight)

INDUSTRIES MAIBEC (Features Detection on Cedar Wood Shingles)

INSTRUMENTS REGENT (Optical Instrumentation)

IRPHOTONICS (Fluoride Fibers)

KRISPY KERNELS (Hyperspectral System for Automatic Sorting of Contaminants)

LASIRIS (Diffractive Optical Elements)

LEDDARTECH (LEDs for Detection and **Distance Measurement**)

LENTILLES DORIC (Refraction Index Gradient Microlens)

MICROSPHÈRE (Optical Correlator for Inspection of Plastic Components)

MPB (Infrared Spectrometer)

NEKS TECHNOLOGIES (Color-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)

NORTECH FIBRONIC (Tunable Fiber Laser)

OBZERV TECHNOLOGIES (DALIS[™] Laser

Illuminator) **OPTI RYTHMIX**

(Virtuo Library)

Software)

OPTIWAVE CORPORATION (Integrated Optics

OPTOSECURITY (Optical Correlator)

OPTOSECURITY (Numerical Optical Correlator Technology)

OPTOSECURITY (INOSegmenter – Image Segmentation Software)

PAVEMETRICS SYSTEMS (Machine Vision Systems for Transport Infrastructure Inspection)

PAVEMETRICS SYSTEMS (Machine Vision Systems for a New Field of Views)

PYROPHOTONICS LASERS (PEFL Laser Technology)

PYROPHOTONICS LASERS (PYFL Fiber Laser Unfolded Cavity Configuration)

QUANTUM BIOMEDICAL (Fiber Endoscope for Intravascular Diagnosis)

REALTRAFFIC **TECHNOLOGIES** (Image Analysis Technology)

SEARIDGE TECHNOLOGIES (Video Monitoring Technology)

SEARIDGE TECHNOLOGIES (Video Surveillance and Video Processing Technology and Source

(Structured Light Projector)

STAS (Hydrogen Fluoride Detector)

SYGIF INTERNATIONAL (Integrated Processes System - SPI)

TELOPS (Integrated Processes System - SPI)

SECTOR ENTERPRISE (Fiber Sensor Technology)

Codes)

SEASTAR OPTICS (Erbium Fiber Laser)

SOLVISION

SYMBIOTECH MEDICAL (Intra-Arterial Analysis and Detection)

WEST COST PETROLEUM

Pricewaterhouse Coopers LLP

June 11, 2015



¹CPA auditor, CA, public accountancy permit No. A118597

REPORT OF THE INDEPENDENT AUDITOR ON THE SUMMARY FINANCIAL STATEMENTS

TO THE MEMBERS OF THE NATIONAL OPTICS INSTITUTE

The accompanying summary financial statements, which comprise the summary statement of financial position as at March 31, 2015 and the summary statements of operations, changes in net assets and cash flows for the year then ended, are derived from the audited financial statements of the National Optics Institute for the year ended March 31, 2015. We expressed an unmodified audit opinion on those financial statements in our report dated June 11, 2015.

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, therefore, is not a substitute for reading the audited financial statements of the National Optics Institute that are available from the organization.

MANAGEMENT'S RESPONSIBILITY FOR THE SUMMARY FINANCIAL STATEMENTS

Management is responsible for the preparation of a summary of the audited financial statements.

AUDITOR'S RESPONSIBILITY

Our responsibility is to express an opinion on the summary financial statements based on our procedures, which were conducted in accordance with Canadian Auditing Standard (CAS) 810, "Engagements to Report on Summary Financial Statements".

OPINION

In our opinion, the summary financial statements derived from the audited financial statements of the National Optics Institute for the year ended March 31, 2015 are a fair summary of those financial statements.

5 1MARY STATEMENT DE EINANCIAL POSITION AS AT MARCH 31, 2015

	2015	2014
	\$	\$
		(restated)
ACCETC		(11010-07
CURRENTASSETS		1 000
Lash	-	1,803
Accounts receivable	3,139,360	2,787,096
Financial support receivable related to		
Internal Research Program (note 2a)	969,578	656,371
Tangible capital assets and intangible assets (note 2b, i)	1,459,763	1,197,265
Inventories	1,620,855	1,225,500
Research contracts in progress	997,836	1,355,870
Prepaid expenses	664,824	698,491
Net investment in a finance lease	167,429	
	9,019,645	7,922,396
INVESTMENTS IN PRIVATE COMPANIES	229,233	504,234
NET INVESTMENT IN A FINANCE LEASE	104,621	—
FINANCIAL SUPPORT RECEIVABLE RELATED TO TANGIBLE CAPITAL ASSETS AND INTANGIBLE ASSETS (note 2b, i)	1,253,912	1,516,499
TANGIBLE CAPITAL ASSETS	22,792,638	25,205,750
LAND HELD FOR SALE	1,075,692	_
INTANGIBLE ASSETS	185,300	234,845
	34,661,041	35,383,724
GUNNENT LIADILITIES	7/1 005	201 057
Excess of outstanding cheques over bank balances	741,500	301,037
Bank loans	/64,883	2,206,759
Accounts payable and accrued liabilities	0,001,007	5,133,755
Deferred revenues and advances on contracts	1,849,439	1,080,779
Current portion of long-term debt	1,640,561	1,340,854
	11,058,535	10,064,004
LONG-TERM DEBT	1,394,820	1,154,355
EMPLOYEE FUTURE BENEFIT OBLIGATIONS (note 4)	535,005	5,210,200
DEFERRED FINANCIAL SUPPORT RELATED TO		
Tangible capital assets and intangible assets (note 2b, ii)	17,194,357	18,100,776
Business and Regional Growth / Innovation program	81,236	129,862
	30,263,953	34,659,197
NET ASSETS	4,397,088	724,527
	34,661,041	35,383 724

CONTINGENCY (note 5)

Approved by the Board of Directors

Director

Fagurt Director

The accompanying notes are an integral part of these summary financial statements



REVENUES

Financial support related to
Internal Research Program (note 2a)
Tangible capital assets and intangible assets (note 2b, ii)
Financing costs (note 2b, iii)
Business and Regional Growth / Innovation program
Sales and contracts
Royalties
Technology transfer agreements and other agreements
Rent and other revenues
Members' contributions

EXPENSES

Salaries and fringe benefits (note 3)	
Cost of goods and services pertaining to project completion	
Other operating expenses	
Foreign exchange gain	
Other than temporary decline in value on investments in private companies	
nterest on long-term debt	
nterest and bank charges	
Depreciation of tangible capital assets	
Amortization of intangible assets	

EXCESS OF EXPENSES OVER REVENUES FOR THE YEAR

NET ASSETS – BEGINNING OF YEAR – AS PREVIOUSLY REPORTED

Change in accounting policy related to employee future benefits

NET ASSETS – BEGINNING OF YEAR – AS RESTATED

Excess of expenses over revenues for the year (restated in 2014)

Remeasurements and other items

NET ASSETS – END OF YEAR

20	1	4
		\$
(resta	ati	ed)
(no	te	3)

2015 \$

(restate	С
(note	3

2015	
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14,600,000	15,443,600
2,087,428	2,455,037
36,470	103,863
48,626	72,272
15,365,823	11,299,042
124,246	148,437
933,980	2,246,076
446,045	311,559
63,100	55,600
33,705,718	32,135,486
16,686,419	16,748,457
6,881,933	5,262,160
7,518,225	6,863,285
(4,051)	(36,116)
275,000	125,000
87,729	154,716
165,298	133,786
2,829,310	3,306,884
127,694	190,843
34,567,557	32,749,015
(861,839)	(613,529)
7,582,727	8,563,956
(6,858,200)	(7,716,200)
724,527	847,756
(861,839)	(613,529)
(137,312)	234,227
4,534,400	490,300
4,397,088	724,527

SLIMMARY STATEMENT
OF CASH FLOWS
FOR THE YEAR ENDED MARCH 31, 2015

	2015	2014
	\$	\$ (restated) (note 3)
CASH FLOWS FROM OPERATING ACTIVITIES		
Excess of expenses over revenues for the year	(861,839)	(613,529)
Items not affecting cash		
Depreciation of tangible capital assets	2,829,310	3,306,884
Amortization of intangible assets	127,694	190,843
Financial support related to tangible capital assets	(132,300)	(307,700)
and intangible assets	(2,136,054)	(2,527,309)
Capitalized interest on financial support repayable	44,524	41,626
Other than temporary decline in value on investments in private companies	275,000	125,000
Sales and contracts in consideration of an investment in a private company	_	(170,000)
	146,135	(14,185)
Changes in non-cash working capital items	804,621	(208,737)
	950,756	(222,922)
CASH FLOWS FROM FINANCING ACTIVITIES		
Variation in bank loans	(1,441,876)	1,683,440
Long-term debt contracted	1,880,868	_
Repayment of long-term debt	(188,113)	(171,492)
	250,879	1,511,948
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisition of tangible capital assets	(1,565,417)	(1,034,663)
Acquisition of intangible assets	(78,149)	(100,219)
Redemption of investments in private companies	_	200,091
	(1,643,566)	(934,791)
NET CHANGE IN CASH	(441,931)	354,235
EXCESS OF OUTSTANDING CHEQUES OVER BANK BALANCES – BEGINNING OF YEAR*	(300.054)	(654,289)
	(()
END OF YEAR*	(741,985)	(300,054)
SUPPLEMENTARY INFORMATION		
* Excess of outstanding cheques over bank balances includes the following amounts disclosed in the statement of financial position:		
Cash Funda a fantatan linn aharman ang kuluku	(784.005)	1,803
Excess of outstanding cheques over bank balances	(741,985)	(301,857)
	(741,985)	(300,054)

The accompanying notes are an integral part of these summary financial statements

MOTES		IMMA	RV
FINANC	TAL	TATE	MSI
MARCH 31, 2015			

STATUTES AND NATURE OF ACTIVITIES

The National Optics Institute (INO) was incorporated on December 13, 1985 under Part II of the Canada Corporations Act and continued on September 11, 2013 under the Canada Not-for-profit Corporations Act. Its mandate is to provide the Canadian optics industry with research and development support and the technical assistance necessary to sustain its growth and to play a leading role in the development and application of optics in Canada.

FINANCIAL SUPPORT

A) FINANCIAL SUPPORT – INTERNAL RESEARCH PROGRAM

The financial support that INO receives as part of the Internal Research Program is as follows:

			Revenue	S
	Total support (2012 to 2016) \$	Support balance available as at March 31, 2015 \$	2015 \$	2014 \$
Government of Canada	45,000,000	9,000,000	9,000,000	9,000,000
Canada Economic Development				
Government of Quebec	33,681,600	7,230,000	5,600,000	6,443,600
Financial support –				
Internal Research Program	78,681,600	16,230,000	14,600,000	15,443,600

GOVERNMENT OF CANADA

In June 2011, the Government of Canada, through the Business and Regional Growth Program of Canada Economic Development, granted INO a maximum financial support of \$45,000,000 for the five-year period ending on March 31, 2016, so as to fund its internal research program. As at March 31, 2015, \$969,578 (\$656,371 in 2014) was still receivable on the fourth \$9,000,000 tranche allocated for the year.

GOVERNMENT OF QUEBEC

The Government of Quebec granted INO financial support of \$33,681,600 over 5 years, ending on March 31, 2016 related to INO's Internal Research Program. The original amount granted in 2012 amounted to \$36,098,000. The financial support allocated for the year in the amount of \$5,600,000 was received in full as at March 31, 2015.

$\begin{array}{l} \text{MITSS TO SLIMMARY} \\ \text{FIMANCIAL STATEMENTS} \\ \text{MARCH 31, 2015} \end{array}$

B) SUPPORT PROGRAM FOR THE PURCHASE OF RESEARCH EQUIPMENT – GOVERNMENT OF QUEBEC

i. Financial support receivable related to tangible capital assets and intangible assets

The financial support receivable pertains to the following items:

	2015 \$	2014 \$
Term loan of an original amount of \$1,880,868 *	1,880,868	_
Term loan of an original amount of \$2,442,421 *	832,807	1,646,615
Term loan of an original amount of \$2,240,636 *	_	383,298
Purchase of research equipment **	_	680,336
Related temporary financing costs	_	3,515
	2,713,675	2,713,764
Less: Current portion	1,459,763	1,197,265
	1,253,912	1,516,499

* These loans were contracted for tangible capital assets and intangible assets and payments on these loans (principal and interest) are made directly by the Government of Quebec to the lending financial institution. As a result, financial support receivable is recorded for an amount equal to the principal of the corresponding debt.

** Pursuant to the financial support agreement, the research equipment purchased under this program will be financed through a long-term debt repayable in equal semi-annual instalments over a period not exceeding 5 years. These payments will be made directly by the Government of Quebec. As at March 31, 2015, no loan is authorized.

ii. Deferred financial support related to tangible capital assets and intangible assets

	2015 s	2014 \$
Balance – Beginning of year	18,100,776	19,875,477
Financial support during the year to acquire tangible capital assets and intangible assets	1,181,009	680,336
Transfer to the revenues for the year to offset the corresponding depreciation and amortization	(2,087,428)	(2,455,037)
Balance – End of year	17,194,357	18,100,776

iii. Financial support related to financing costs

INO receives financial support for the interest charges related to certain long-term debts. The financial support received for this purpose amounts to \$36,470 (\$103,863 in 2014) and was included in revenues.

$MDT\Sigma5 TD 5LIMMARY$ FINANCIAL STATEMER MARCH 31, 2015

CHANGES IN ACCOUNTING POLICIES

DEFINED BENEFIT PLAN

On April 1, 2014, INO adopted the new Section 3462 in Part II of the CPA Canada Handbook - Accounting, "Employee Future Benefits", and the new Section 3463, "Reporting employee future benefits by not-for-profit organizations", in Part III, issued by the Canadian Accounting Standards Board (AcSB). These sections replace Section 3461 in Part II of the CPA Canada Handbook - Accounting on the same subject.

Under the new standards, actuarial gains and losses and past service costs are no longer deferred and amortized over future periods, but are immediately recognized in net assets. In addition, the interest cost and the expected return on plan assets are replaced by an amount of net interest calculated by applying a discount rate used in determining the net defined benefit obligation.

In accordance with the standards, INO is also required to change its measurement date, which will no longer be December 31, but the statement of financial position date, i.e. March 31. To make this change, INO applied the transitional provisions and set the measurement period to 15 months extending from December 31, 2013 to March 31, 2015. INO allocated 12/15 of this measurement period to 2015. As a result, an adjustment representing 3/15 of this same period was recognized in opening net assets for 2014.

For defined benefit plans for which there is an actuarial valuation prepared for funding purposes, INO could have elected to use either an actuarial valuation prepared for funding purposes or an actuarial valuation prepared for accounting purposes. INO elected to use an actuarial valuation prepared for funding purposes as such a valuation exists.

INO adopted the new Sections 3462 and 3463 retrospectively, which had the following effect:

Reporte

STATEMENT OF FINANCIAL POSITION ASSETS Employee future benefit asset (liability)

Reporte

STATEMENT OF CHANGES IN NET ASSETS

Opening net assets as at April 1, 2013 Net assets as at March 31, 2014

Reporte

STATEMENT OF OPERATIONS Salaries and fringe benefits

Salaries and fringe benefits Excess of expenses over revenues

at March 31, 2014	As	
Restated amount \$	Restatement \$	ed amount \$
(5,210,200)	(6,858,200)	1,648,000
n 31, 2013 and 2014	years ended March	For the
Restated amount \$	Restatement \$	ed amount \$
847,756	(7,716,200)	8,563,956
724,527	(6,858,200)	7,582,727
ed March 31, 2014	For the year end	
Restated amount \$	Restatement \$	ed amount \$
16,748,457	(367,700)	17,116,157
613 529	(367 700)	QQ1 22Q



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.

DEFINED BENEFIT PENSION PLAN

The most recent actuarial valuation of the pension plan was performed on December 31, 2013 and was extrapolated as at March 31, 2015. Information related to the defined benefit pension plan is as follows:

	2015 \$	2014 (restated)
Defined benefit obligations	(35 061 500)	(33 633 700)
Fair value of plan assets	34 645 500	28 550 800
Defined benefit liability	(416 000)	(5 082 900)

As at March 31, 2015, the employee future benefit obligations are as follows:

	2015 s	2014 \$
Defined benefit pension plan	416 000	5 082 900
Other employee future benefits	119 005	127 300
	535 005	5 210 200



Lawsuits have been initiated against INO in the normal course of its operations. Although management contests these claims, there is a risk that an amount will need to be disbursed to settle the lawsuits. Accordingly, a provision for litigation amounting to CAN \$600,000 has been recognized.



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Director

Canada

GUY LABERGE¹

Quebec, Quebec

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JEAN-GUY PAQUET ^{1.3.} Chairman of the Board of Directors

Quebec, Quebec

INO

INO

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