

RESEARCH & DEVELOPMENT CORPORATION

**ANNUAL
REPORT
2016-17**

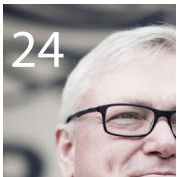
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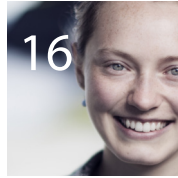
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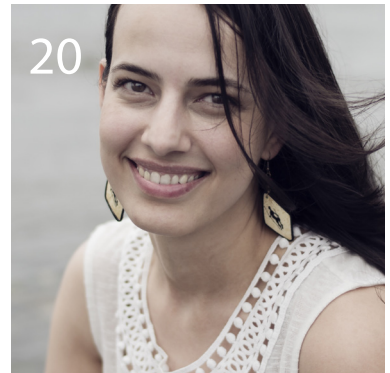
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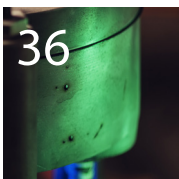
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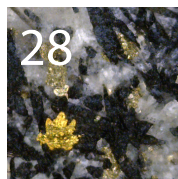
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MESSAGE FROM THE CEO

TED LOMOND

2016-17 was a successful year for the Research & Development Corporation (RDC), which is responsible, together with other provincial departments, for supporting R&D in the province. RDC continued its work to increase R&D activity in the province by supporting R&D projects with strong potential for economic impact, providing professional R&D supports to fill gaps identified by industry, and leveraging its relationships to help foster R&D collaborations. These efforts resulted in continued positive impact in 2016-17.

This year, RDC invested nearly \$16 million in 133 R&D projects. Between 2009 and the time of this writing, this brings RDC's investment portfolio to \$143 million across more than 800 projects in a variety of sectors by numerous R&D performers. These commitments have leveraged \$369 million in co-funding from partners such as other government agencies, businesses and academic institutions, including over \$29 million in 2016-17.

The foundation of R&D is the highly qualified personnel (HQP) required to conduct specialized R&D activities, and RDC supported 415 HQP and 178 students in 2016-17. These talented and skilled people will contribute to the success of Newfoundland and Labrador for years to come. RDC is pleased to support students and researchers like Nora Boone, Dr. Andrew Smith and Dr. Stefana Egli, who are all profiled in this report.

In the current period of low commodity prices and economic slowdown, the primary way for Newfoundland and Labrador to achieve sustainable economic growth is to upgrade and diversify its economy. In this dynamic environment, investments in R&D by government, industry and educational institutions are essential for

generating the productivity gains required for long-term economic prosperity. Examples of companies that are finding success through innovation are highlighted in this report, including Kraken Sonar Systems, eDNAtec, Marathon Gold, Goulding's Wholesale and Newfoundland Energy Services.

I would like to take this opportunity to thank the outgoing Board of Directors for their leadership and strategic guidance of RDC through the years. Their focus and commitment in support of RDC's mandate enabled the organization to achieve tremendous outcomes. I also recognize RDC staff for their strong performance and dedication to client service. Without you, we would not see these exceptional results nor the significant return on provincial R&D investments. The Board and staff have well positioned RDC in the broader innovation landscape and I look forward to taking that momentum forward into InnovateNL.

InnovateNL is the new central delivery mechanism responsible for provincial innovation programs and services, including those areas previously held by RDC. The importance of R&D in seeding a foundation for innovation is still recognized by the Government of Newfoundland and Labrador and InnovateNL will be proud to continue the good work of RDC.

As CEO of InnovateNL, I am pleased to present RDC's final Annual Report. This report has been developed in accordance with the legislative requirements of the Transparency and Accountability Act. My signature indicates full accountability for the results reported.





MANDATE

The mandate of RDC is to “strengthen the focus, quantity, quality and relevance of research and development undertaken in the province and elsewhere for the long-term economic benefit of the province” (*Research and Development Council Act*).



VISION

R&D fuels innovation and creates economic growth and prosperity in Newfoundland and Labrador.



RDC PROGRAMS

RDC delivers R&D programs that support highly-qualified people, cutting-edge R&D projects, and world-class research infrastructure. These programs are regularly evaluated to ensure they are achieving objectives. An overview of RDC's programs is provided on the following page.

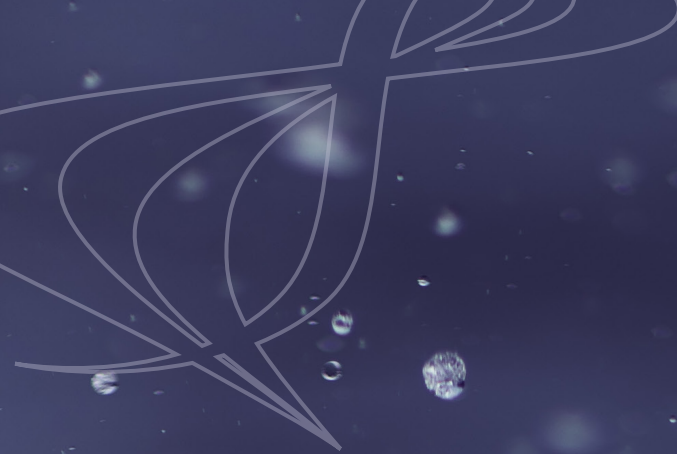


STAFF AND BUDGET

RDC employed 39 staff (24 female and 15 male) at the end of 2016-17. The RDC office was located at 68 Portugal Cove Rd., St. John's, NL. In 2016-17, RDC received a budgetary allocation of \$18.9 million and had expenses of \$21.0 million. Audited financial statements are available at the end of this report.

PROGRAMS DESCRIPTION RDC MAXIMUM CONTRIBUTION

PROGRAMS	DESCRIPTION	RDC MAXIMUM CONTRIBUTION
R&D Vouchers	Facilitates business access to external resources, including scientific and technical equipment, expertise, and research facilities	\$15,000
R&D Proof of Concept	Increases the technical capacity of businesses to perform R&D with commercial potential	\$250,000
EmployR&D	Enables businesses to hire recent PhD graduates to support R&D activities	\$75,000 / year (<i>Maximum 2 years</i>)
PetroleumR&D Accelerator	Strengthens R&D in support of petroleum exploration, development and operations	\$5,000,000
GeoEXPLORE (2017-19)	Enhances geoscience R&D capacity in support of mineral and petroleum exploration and development	Academia: \$250,000 Business: \$750,000
ArcticTECH (2015-19)	Advances R&D in support of the development of Arctic and other harsh environment technologies	Academia: \$250,000 Business: \$750,000
SensorTECH (2015-17)	Supports research, development and deployment of sensor technologies	Academia: \$500,000 Business: \$750,000
CollaborativeR&D	Supports academic-led collaborative R&D projects with business and government partners	\$500,000
LeverageR&D	Strengthens R&D capacity through leveraging private and non-provincial public funding sources	\$500,000
Research Inspired Student Enrichment (RISE) Awards	Exposes high school students to research activities at an early stage in their education	\$150,000 Annually



HIGHLIGHTS AND PARTNERSHIPS

In the past year RDC has successfully advanced its mandate by strengthening the focus, quantity, quality and relevance of R&D in the province. The long-term economic benefits produced by R&D are essential for achieving sustainable economic growth in an increasingly knowledge-based world economy. In support of R&D activities last year, RDC continued to place an emphasis on collaboration by strengthening its partnerships with government, industry and academia. A number of highlights and partnerships from 2016-17 are discussed below.

SUPPORTING THE WAY FORWARD: Last year RDC successfully worked with the Government of Newfoundland and Labrador to support a number of initiatives contained in The Way Forward. This includes participating in the Business Innovation Agenda and supporting its Private Sector Advisory Committee, as well as participating in discussions around the More Effective Business Financing Committee and the Regional Innovation System (RIS) pilot projects. This close coordination helps to enable better decision making and to maximize the chances of making a positive economic impact with all public R&D investments. Last year RDC also focused on The Way Forward goal to place private sector job growth at the center of all decisions, as RDC's approach emphasized investing in the people, projects and equipment required to conduct R&D and to create and retain high value employment opportunities in the province.

THE "COLLABORATIVE R&D NETWORK" (CRN) PILOT PROJECT: The most innovative jurisdictions in the world have high levels of R&D collaboration and to facilitate more collaboration locally, last year RDC launched a CRN pilot project focused in the area of marine safety and simulation. This ongoing pilot project involves a partnership with OceansAdvance, a local ocean technology cluster management organization, to build an informal R&D network around a specific community of practice. The goals of this pilot project include establishing an informal sector-specific network of R&D stakeholders, generating multiple collaborative R&D projects in the area of marine safety and simulation, and helping to form the connections between experts in business and academia needed to enable more collaborative R&D in the province for years to come. Early progress includes holding three outreach events and the development of two draft collaborative R&D project proposals by different teams of researchers.

FEDERAL COLLABORATION: RDC actively seeks opportunities to cooperate with the Government of Canada to advance R&D activity in the province. Last year this included:

The R&D Roundtable: In an effort to improve the delivery and alignment of public R&D supports in the province, last year RDC took a lead role in establishing an R&D Roundtable that includes senior executives from RDC, the

Atlantic Canada Opportunities Agency (ACOA), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the National Research Council Canada (NRC). The mandate of the R&D Roundtable is to collaborate, align, problem solve, and share information. Improving coordination and collaboration among the provincial and federal government entities supporting R&D is a consistent RDC focus as it is essential for improving client service and maximizing the benefits of all public R&D investments.

Partnering with Genome Atlantic: This year RDC began formal discussions to enter into a Memorandum of Understanding (MOU) with Genome Atlantic, one of five regional centres of Genome Canada. The MOU will concentrate on co-funded R&D conducted at Memorial University that aligns with industry needs or development opportunities for the province. The MOU will formalize the working relationship RDC has with Genome Atlantic whereby both agencies will seek opportunities for collaboration on potential R&D projects that may have a positive economic benefit for the province. It will also strengthen connections with other regional centres under Genome Canada and help RDC to form collaborations between researchers and scientists located in the province and elsewhere in the country.

Collaborating to Advance R&D Initiatives: In 2016-17, RDC broadly collaborated with its federal partners to advance multiple R&D related initiatives. This includes working to develop an Atlantic Growth Strategy, partnering with a range of regional stakeholders to advance an Atlantic Ocean Cluster proposal, and participating in a Federal-Provincial-Territorial (FPT) working group on Clean Technology, Innovation and Jobs (CTIJ). These collaborations help to strengthen provincial-federal alignment and build the connections needed to advance R&D in the province and across Canada.

EVALUATION OF GEOEXPLORE AND R&D VOUCHERS: In 2016-17 RDC conducted an evaluation of two of its R&D programs, GeoEXPLORE and R&D Vouchers, and found both to be performing as anticipated. RDC's strong commitment to evaluating its programs against established timelines enables it to make evidence based decisions and to proactively identify and resolve any challenges that may develop.



REPORT ON PERFORMANCE



This year marks the conclusion of a three year strategic plan cycle and therefore reports on RDC's performance over the past fiscal year (2016-17) and over the past three years (2014-17). The following performance report highlights the impact that RDC has made in each of its three strategic issues:

SERVING AS
A CATALYST
TO SUPPORT
INCREASED R&D

FOCUSING R&D
IN PRIORITY
AREAS

SUPPORTING
INCREASED
BUSINESS R&D
INVESTMENT

STRATEGIC ISSUE 1: SERVING AS A CATALYST TO SUPPORT INCREASED R&D

R&D enables scientists and researchers to develop the new knowledge, processes, products and technologies required for people and economies to create more value with fewer resources. RDC serves as a catalyst to increase R&D activity to produce long-term economic benefit for the province. This includes playing a leadership role for R&D in the province by investing in high potential R&D projects, leveraging project funds from public and private sector sources, promoting the role and value of R&D, investing in local experts, and continuing to build collaborative relationships. All of these activities are essential for creating a sustainable knowledge-based economy that is globally competitive.

INDICATOR 1.1

NUMBER OF, AND RDC FUNDING FOR, R&D PROJECTS

Fiscal Year	# of Projects	Value of RDC Investment
2014-15	108	\$21,895,944
2015-16	121	\$20,777,919
2016-17	133	\$15,958,784
TOTAL	362	\$58,632,647

INDICATOR 1.2

AMOUNT OF R&D INVESTMENT LEVERAGED

Fiscal Year	Total Value of Leverage
2014-15	\$89,388,914*
2015-16	\$48,217,179
2016-17	\$29,432,837
TOTAL	\$217,048,930

* Adjusted based on cancelled projects

INDICATOR 1.3

NUMBER OF, AND RDC FUNDING FOR, R&D INFRASTRUCTURE AND EQUIPMENT

Fiscal Year	# of Investments	RDC Investment
2014-15	142	\$7,367,447
2015-16	125	\$6,263,506
2016-17	160	\$4,762,450
TOTAL	427	\$18,393,403

INDICATOR 1.4

NUMBER OF R&D COLLABORATIONS SUPPORTED

Fiscal Year	Total Collaborations
2014-15	189
2015-16	147
2016-17	222
TOTAL	558

INDICATOR 1.5

NUMBER OF OUTREACH AND PROMOTIONAL ACTIVITIES IN SUPPORT OF R&D

Fiscal Year	# of Conferences / Trade Shows Attended	# of Events	# of News Articles Highlighting RDC
2014-15	55	13	54
2015-16	63	10	33
2016-17	75	14	21
TOTAL	193	37	108

INDICATOR 1.6

NUMBER OF HIGHLY QUALIFIED PEOPLE (HQP) SUPPORTED

Fiscal Year	HQP Supported	Students Supported*
2014-15	352	200
2015-16	331	136
2016-17	415	178
TOTAL	1098	514

* "Students" includes those pursuing a Master's Degree or lower

REPORT ON 2016-17 OBJECTIVE

2016-17 Objective: By March 31, 2017, RDC will have undertaken activities to serve as a catalyst to support increased R&D in the province

DISCUSSION OF RESULTS

Although industry continued to reduce their R&D budgets this year due to a general economic slowdown, RDC persisted in meeting its objective. In 2016-17, RDC supported a higher number of smaller-scale R&D projects involving more collaborators than in previous years. For example, last year RDC supported 133 R&D projects involving 222 R&D collaborators, the highest to date. In addition, RDC's investments also supported over 178 students (Master's degree or lower) and 416 highly qualified people (HQP). Supporting collaborative projects and R&D experts represents an investment today that will increase the amount of R&D able to be conducted in the province for years to come.

Another part of RDC's strategy included a focus on sponsoring highly relevant events and participating in outreach and promotional activities. This included sponsoring the Arctic Technology Conference (ATC), where RDC co-hosted an "Innovation Theatre" and presented at a panel on arctic technology.

REPORT ON 2014-17 GOAL

Goal: By March 31, 2017, RDC will have served as a catalyst to support increased R&D investment in Newfoundland and Labrador

Measure: Served as a catalyst to support increased R&D investment

DISCUSSION OF RESULTS

In an effort to catalyze and increase R&D, RDC invested over \$58 million into 362 projects, including \$18.4 million in R&D infrastructure and equipment over the past three years. These projects leveraged \$217 million in private and public funding, achieving a 3 to 1 leverage ratio in the 2014-17 period. RDC's investment has supported over 1098 highly qualified people, in addition to 514 students, and in the process enabled 558 R&D collaborations, with an average of 2 collaborations per project.

The 2014-17 period was a challenging one with the economic slowdown in the province leading to constrained R&D budgets in the public and private sector. However, during this time RDC catalyzed increased R&D collaboration. Raising the number of collaborations between industry and academia is an important trend as it provides industry with increased access to local expertise, and helps researchers to commercialize their industry-relevant work. Increased collaboration also enables more sharing of infrastructure and expertise, making it possible for R&D to be conducted in a more cost efficient manner.

Every project funded by RDC is disclosed publicly and we encourage readers to learn more about all of the world-class R&D projects we support at www.rdc.org/projects



NORA BOONE
**TO NORTH
AND
BEYOND**

For many high school students, a typical day consists of homework, leisure, and working a part-time job. Nora Boone's unconventional schedule ranges from practicing the arts to dedicating time for researching and developing prototypes to assist brain surgery.

The recent high school graduate was a successful recipient of RDC's 2016 Research Inspired Student Enrichment (RISE) Awards. The RISE Awards program invests in the personal development of high-caliber students in Newfoundland and Labrador, giving them opportunities to learn about the fascinating world of R&D. By participating in a summer enrichment program before starting their final year of high school, it presents youth with additional perspective when considering what comes next in their career.

Nora's RISE Awards experience took her to the Canadian Arctic, exploring the northern rugged coastline and allowing her to learn alongside international students, scientists, researchers, government officials and indigenous leaders. This opportunity taught her the value of collaboration to address global issues such as climate change and work towards sustainable solutions, and has given her insight into a future career path.

For Nora, having perspective from all angles is crucial to solve any problem.

The RISE Award recipient applied her passion for collaboration upon returning home, where she connected with neurosurgeon Dr. Roger Avery and Memorial University campus group MUN Med 3D to refine medical technology she had conceptualized the year prior for a school science project. Nora's simulation tool, which, when demonstrated, will allow physicians to conduct brain surgery in remote areas, was successful in winning several national awards, including a gold medal, the Youth Can Award, and the Innovation Challenge Award for her age group at the National Science Fair.

Nora will be continuing her involvement in medicine over the next four years as she begins her post-secondary life studying medical science.

At RDC, we believe that investing in high school students supports the next generation of R&D leaders. RISE provides opportunities for high school students to explore previously unknown fields of study, which help shape their future goals and ambitions.

As for Nora, you can find the 18-year-old training medical school students on how to use her invention, with hopes that all physicians in Newfoundland and Labrador will use this life-saving technology in the future.

The RISE Award recipient applied her passion for collaboration upon returning home



“we believe that investing in high school students supports the next generation of R&D leaders”

DR. ANDREW SMITH
GO FOR
THE
JUGULAR



Imagine ground-breaking medical technology focused on improving the lives of patients around the globe which is conceptualized, developed, and manufactured right here in Newfoundland and Labrador. That's just what family physician and assistant professor Dr. Andrew Smith and his company JRAS Medical is planning to do.

Having been educated in the fields of engineering and medicine, Dr. Smith saw an opportunity to bring both of his areas of knowledge together and avail of RDC's IgniteR&D program in 2013 to work towards improving medical tools used by physicians in the ER. This project served as a stepping stone for Dr. Smith as it fostered his innovative and entrepreneurial spirit and ultimately led to the establishment of his medical device company, JRAS Medical, in 2016.

With JRAS established, RDC invested in Dr. Smith and cofounder Dr. Jason Roberts through the R&D Vouchers program, where together they developed an instrument to enhance measurement of the jugular venous pressure - the JVPez. JRAS sought to improve upon the traditional model of measuring a patient's jugular vein, an approach that consisted of using two perpendicular rulers to determine the height of the venous column. The mindfully-developed JVPez has the potential to provide more accurate clinical assessments which can subsequently lead to improved medical outcomes for patients with congestive heart failure. Given the underlying potential of the prototype and the impact it could have on the medical field, RDC was pleased to provide further support to JRAS through the R&D Proof of Concept program and ready the technology for clinical testing.


For Dr. Smith, this is only the beginning. The tremendous support he has received from the local medical and entrepreneurial community has encouraged him to continue his efforts in diversifying the medical field in the province. Moving forward, JRAS has plans to continue developing vital instruments to improve the medical sector, with the intention to distribute the first production of JVPez Gauges later this year and begin to work on their next project.

Dr. Smith's vision is to benefit Newfoundland and Labrador by improving patient care, diversifying the economy, and increasing the emphasis on R&D in the biomedical engineering field. At RDC, we recognize the significant role R&D plays for medical technology and believe investing in diverse sectors positively impacts the social and economic development of Newfoundland and Labrador.



For Dr. Smith, this is only the beginning

Dr. Smith's vision is to benefit Newfoundland and Labrador



STEFANA EGLI
**WHAT'S IN
THE WATER?**

As exploration and development continues to thrive in Newfoundland and Labrador's offshore oil and gas industry, there is a growing need to improve oil spill detection technologies and ensure that the health of marine ecosystems is in compliance with regulatory standards. The detection and analysis of contaminants in harsh marine waters can be challenging work, but for Dr. Stefana Egli, a research associate with Memorial University's Department of Chemistry, it's a challenge that she's up for.

After graduating with a Bachelor and Honours degree in Chemistry and Environmental Science from the University of KwaZulu Natal in South Africa, Dr. Egli moved to Newfoundland and Labrador to further her academic career in analytical chemistry at Memorial. Working under the supervision of Dr. Christina Bottaro, Dr. Egli was a successful recipient of RDC's 2010 Ocean Industries Student Research Awards (OISRA). Designed to recruit, foster and retain top university students in the province, the OISRA program supported academic research in areas relevant to the province's ocean industries.

Dr. Egli successfully completed her PhD studies under the OISRA program, developing thin-film molecularly imprinted polymer (MIP)-based monitoring systems that adsorb key oil related compounds in complex water samples using a unique technique. The specific compounds can be directly analyzed on the surface of the polymer or extracted and analyzed in a laboratory. She then continued to build momentum in water analysis technology with Dr. Bottaro by applying the MIPs in-field, by transferring the MIP technology to other classes of compounds and by promoting this work to various international conferences.

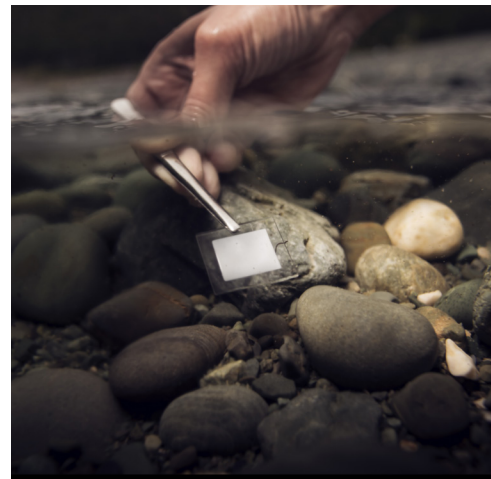
Although this technology is disruptive, it is valuable for the oil and gas companies operating in offshore Newfoundland, as it is cost-effective, portable and environmentally sustainable in comparison to current protocols. Sampling can also be conducted in remote locations by attaching the MIPs to remotely operated vehicles.

Following the success of the initial phase of the MIP technology development, in 2017 RDC invested in phase two of this project through the ArcticTECH Collaborative R&D program. This phase has resulted in the incorporation of Intelligent Materials, a spin-off company from Memorial University. Now Dr. Egli is taking the MIP technology develop in her previous work through a regimented product development protocol to yield a market-ready product which includes technological and market validation.

Stepping outside her comfort zone, Dr. Egli has pushed herself to overcome challenges related to product development and commercialization by participating in the Evolution and MaRS on the Rock programs at the Genesis Centre, Memorial University's business incubator for technology start-ups. Her drive for success was evident when she won first place at a recent Genesis start-up competition, Pitch & Pick.

Her accomplishments to date have demonstrated that she has the passion for R&D excellence and the entrepreneurial skills required to make her work a commercial success. And she's not stopping with the oil and gas industry. MIP technology is transferrable to a variety of environmental compounds such as disinfection-by products, pesticides, herbicides, other oil-related compounds, pharmaceuticals, caffeine for applications in drinking water, wastewater and fresh water.

By detecting contaminants in our waters, Dr. Egli is helping to protect marine environments and preserve water supplies. Water is, after all, a vital source of life.



Stepping outside her comfort zone, Dr. Egli has pushed herself to overcome challenges



STRATEGIC ISSUE 2: FOCUSING R&D IN PRIORITY AREAS

A focused approach to supporting R&D offers the highest potential for maximizing the economic returns realized on R&D investments. Therefore, R&D activities have been focused into the RDC Board's priority sectors of energy, mining and minerals, and ocean technology to capitalize on the province's competitive advantages in these sectors. In addition to these priority sectors, RDC has also identified and funded high potential R&D projects in other complementary sectors to ensure that no significant opportunity is missed.

INDICATOR 2.1

NUMBER OF, AND RDC FUNDING FOR, PROJECTS IN PRIORITY SECTORS

Fiscal Year	# of Priority Sector Projects	Value of RDC Investment
2014-15	58	\$13,973,956
2015-16	53	\$13,973,956
2016-17	42	\$9,089,979
TOTAL	153	\$ 73,168,324

INDICATOR 2.2

AMOUNT OF R&D INVESTMENT LEVERAGED IN PRIORITY SECTORS

Fiscal Year	Total Leverage in Priority Sectors
2014-15	\$30,921,693*
2015-16	\$33,080,808
2016-17	\$18,910,216
TOTAL	\$82,912,717

*Adjusted based on cancelled projects

INDICATOR 2.3

RATIO OF PROJECTS FUNDED IN PRIORITY SECTORS VERSUS ALL OTHER SECTORS

Fiscal Year	% of Projects in Priority Sectors	% of Total Funding in Priority Sectors
2014-15	54%	78%
2015-16	44%	67%
2016-17	32%	57%
TOTAL	43%	67%

INDICATOR 2.4

NUMBER OF HIGHLY QUALIFIED PEOPLE SUPPORTED IN PRIORITY SECTOR R&D PROJECTS

Fiscal Year	HQP Supported	Students Supported *
2014-15	188	102
2015-16	204	72
2016-17	204	91
TOTAL	596	265

INDICATOR 2.5

OPPORTUNITIES ADVANCED TO SUPPORT NEW R&D FACILITIES THAT INCREASE R&D INVESTMENT IN PRIORITY SECTORS

2016-17 Report

To date, all prospective R&D facility opportunities have been concentrated in RDC's priority sectors. Last year, business development at the Coastal Exposure Materials Testing Services site continued with exhibits at NACE, the American Coatings Show, and the Arctic Technology Conference (ATC). This resulted in revenue for the site in its first full year of operations of \$51,000.

RDC had also launched a pilot study in the spring of 2017, Oversea Atlantic, a commercial radar testing facility for the ocean technology sector.

2014-17 Report

Throughout the 2014-17 period, RDC has examined and narrowed down potential R&D facility opportunities relating to energy, mining and minerals, and ocean technology. More specifically, the Coastal Exposure Materials Testing Services site in Argentina was launched and became fully operational during this period, providing R&D testing services to the energy and ocean technology sectors.

REPORT ON 2016-17 OBJECTIVE

2016-17 Objective: By March 31, 2017, RDC will have undertaken activities to support increased R&D investment in priority sectors

DISCUSSION OF RESULTS

Last year was a challenging year for the oil and gas industry, a primary driver of the provincial economy and one of RDC's priority sectors (energy). In 2016-17, RDC invested \$9 million in 42 priority sector projects that leveraged \$18.9 million from other funding sources. Although the number of priority sector projects decreased to 42 in 2016-17, RDC continued to focus a majority (57%) of the program budget on high-potential priority sector R&D projects, effectively increasing the impact, such as increased HQP, for the province. A sample of these projects includes Stefana Egli's work to market validate her ocean technology through RDC's ArcticTECH program, eDNAtec's work to open the world's first environmental genomics lab which was supported by our PetroleumR&D accelerator program, and Kraken Sonar Systems continuing to develop its KATFISH autonomous underwater vehicle (AUV) with the support of RDC's SensorTECH program. Each of these specific projects is profiled in this report.

REPORT ON 2014-17 GOAL

Goal: By March 31, 2017, RDC will have provided support to increase R&D investment in the priority sectors of energy, mining and minerals, and ocean technology

Measure: Supported increased R&D investment in priority sectors

DISCUSSION OF RESULTS

The last three years saw the provincial economy and local oil and gas industry, one of RDC's priority sectors, experience difficult operating conditions that led to constrained R&D budgets. RDC funding for priority sector R&D projects remained strong at \$73 million, leveraging \$83 million from other funding partners, and representing 67 percent of total RDC funding. A key component of driving priority sector R&D included the successful delivery of RDC's tailored suite of programs, most notably ArcticTECH, PetroleumR&D Accelerator and SensorTECH.

It is interesting to note that despite changes in total leverage for priority sector projects over the past three years, the leverage ratio remained consistent at \$3 leveraged for every \$1 RDC invested. These RDC investments in priority sector R&D projects supported 204 highly qualified people (HQP) and 265 students, with over 54 percent of the HQP supported in priority sectors.

KRAKEN SONAR SYSTEMS
MAKING
INTERNATIONAL
WAVES IN OCEAN
TECHNOLOGY



The ocean holds 97% of the earth's total water. For Kraken Sonar Systems, the untapped potential of subsea exploration provides a tremendous opportunity.

Established in September 2012, Kraken found a niche market in ocean technology; specifically, the development of high performance sonar, sensors and underwater robots. The research and development of their signature Synthetic Aperture Sonar (SAS) technology takes place in the coastal community of Conception Bay South, from where they are the only Canadian company and one of only a few businesses in the world to successfully commercialize this technology.

Offshore exploration, seabed mapping and military operations are among the many activities that require accurate seabed imaging of the ocean floor. SAS, being the most innovative and efficient technology on the market, provides over 25 times greater range and resolution with ten times the area coverage compared to conventional sidescan sonars.

It became increasingly clear to RDC to invest in the Kraken Active Tow Fish – also known as the KATFISH. Using the latest ground-breaking SAS technology, the KATFISH provides real-time ultra-high resolution images of the ocean floor. Kraken's sonar technology saves lives by detecting risks, such as small explosives or other dangerous material up to 6,000m underwater, allowing time for boats, equipment, and people to get out of harm's way. The development of the KATFISH is complete, and is highly sought after by countries around the world.

Kraken CEO and President Karl Kenny explains that for a business to be successful you need to know your market. "It's like what Wayne Gretzky said: Go to where the puck is going to be. That's what you need to do with technology in this market." For a small company, continual investment in R&D is the only way to compete on a global stage. Now, Kraken finds themselves inking deals with major international players, including defense contractors in the United States, Europe and the Middle East.

Kraken is one of the many successful companies RDC invests in that are taking innovative approaches to the ocean technology sector. As one of RDC's priority sectors, Newfoundland and Labrador companies and researchers are world leaders in the ocean technology field, utilizing the province's unique geography and resources.

Kraken has begun to commercialize their technology and make international partnerships, with more exciting developments to come. But for this small company located on the Avalon Peninsula on the ocean's edge, reinvesting in R&D will always make their technology stand out from the rest.



"for a business to be successful you need to know your market"





*For eDNAtec, there's
an ocean of
opportunity ahead*



Our environment is filled with living organisms. Each of these living organisms leaves traces of their DNA in their surroundings and is a reflection of the current and past presence of organisms.

Environmental DNA, better known as eDNA, can be collected from environmental samples such as water, soil, and sediment and used to gain a better understanding of how various organisms interact with the environment. In fact, the analysis of eDNA has great potential to solve some of the world's biggest environmental challenges.

Recognizing the potential benefits to the offshore oil and gas industry in Newfoundland and Labrador, as well as internationally, eDNAtec Inc., an environmental genomics research company, was established in St. John's to develop environmental DNA technologies to support environmental assessment and monitoring programs.

A blurred background image of laboratory equipment, possibly a pipette or a similar instrument, with a blue and white color scheme. The text is overlaid on the right side of the image.

EDNATEC REVOLUTIONIZING CHARACTERIZATION OF THE OCEAN ENVIRONMENT

With an investment from RDC's Petroleum R&D Accelerator program, eDNAtec is establishing a focused R&D program at their Centre for Environmental Genomics Applications using advanced genomics tools to determine which organisms are present in the environment. Their goal is to provide stakeholders with more insight into the biodiversity of the environment in comparison to conventional environmental assessment and monitoring programs.

This technology allows researchers to analyze DNA from a small sample of seawater and determine which organisms are represented, from whales all the way to microscopic bacteria. In fact, these new methodologies can be equated to looking into space through the Hubble telescope when previously all you had

was a pair of binoculars. Not only does this world-class facility have the potential to provide significant insights into marine science, it also puts the province on the map as a leader in environmental assessment and monitoring.

For eDNAtec, there's an ocean of opportunity ahead.



MARATHON GOLD CORP
**MAKING A
GOLD MINE**



Newfoundland and Labrador contains a rich geological landscape, possessing valuable minerals that can be extracted and processed into useful products. For Marathon Gold Corp, they are defying the odds in their quest to explore gold near Valentine Lake.

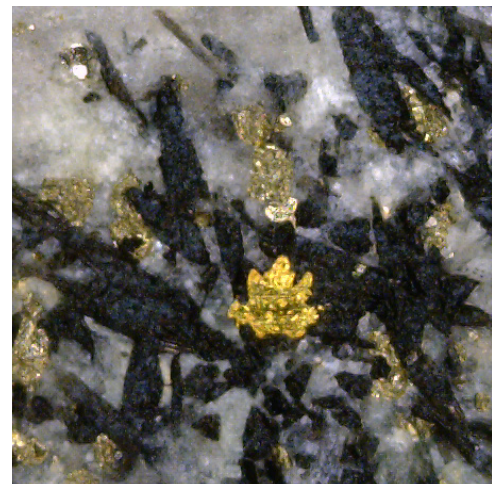
Established in 2009, Marathon Gold also has properties in Oregon, yet their success in exploration at the Valentine Lake Project have led to the Company focusing all its resources on the Newfoundland property. The property extends 30 kilometers in length and covers 240 square kilometers, with potential to extend beyond multi-million ounces of gold within its land mass.

As a priority sector, RDC understands the value of the mining industry for Newfoundland and Labrador. With investment from RDC, the company has been able to undertake metallurgical work which has resulted in the recovery of gold with a concentrate of greater than 96%, with 45-55% able to be successfully recovered by gravity. This innovative approach to gold discovery improves the effectiveness of exploration and sets up the company for great success.

Researchers within Memorial University's Department of Earth Sciences also believe the Valentine Lake property shows promise. Dr. Graham Layne has partnered with Marathon Gold as he has received RDC funding to study the geochemical properties of the mineral deposits across the region. Dr. Layne has been instrumental in the development of highly qualified personnel in this field; in fact, many students who have graduated under Dr. Layne's watch are now full-time Marathon Gold employees with the Valentine Lake project.

With RDC's investment, Marathon Gold continues to discover new ways to be successful by bringing an innovative lens to a traditional industry.

With RDC's investment, Marathon Gold continues to discover new ways to be successful



STRATEGIC ISSUE 3: SUPPORT INCREASED BUSINESS R&D INVESTMENT

Businesses conducting R&D is a key indicator of how committed they are to innovating the new processes, products and technologies required to be globally competitive. Newfoundland and Labrador has historically had comparatively low levels of business R&D and RDC has strategically worked to change this by co-investing in business-led R&D projects and supporting businesses in hiring and collaborating to access the talent they need to conduct world-class R&D.

INDICATOR 3.1

NUMBER OF, AND RDC FUNDING FOR, BUSINESS R&D PROJECTS

Fiscal Year	# of Business R&D Projects Funded	Value of RDC Investment
2014-15	33	\$13,480,072
2015-16	34	\$13,054,151
2016-17	48	\$8,972,530
TOTAL	115	\$35,506,753

INDICATOR 3.2

AMOUNT OF R&D INVESTMENT LEVERAGED FROM BUSINESSES

Fiscal Year	Total Leverage from Business
2014-15	\$51,615,801*
2015-16	\$36,191,519
2016-17	\$19,522,359
TOTAL	\$107,329,679

* Adjusted based on cancelled projects

INDICATOR 3.3

NUMBER OF HIGHLY QUALIFIED PEOPLE SUPPORTED IN BUSINESS R&D PROJECTS

Fiscal Year	HQP Supported	Students Supported *
2014-15	144	0
2015-16	97	1
2016-17	123	1
TOTAL	364	2

* "Students" includes those pursuing a Master's Degree or lower

INDICATOR 3.4

OPPORTUNITIES ADVANCED TO SUPPORT NEW R&D FACILITIES THAT INCREASE BUSINESS R&D INVESTMENT

2016-17 Report

In 2016-17, RDC pursued number of new opportunities for R&D testing facilities, while continuing business development for Coastal Exposure Materials Testing Services, to increase business R&D investment in the province. The Coastal Exposure sales target was exceeded last year, and a strategy was developed to expand the facility's focus to more complex, higher revenue project work.

RDC also progressed radar testing facilities through the pilot study, Oversea Atlantic, by providing data to local and global companies to test their ice and target detection products and as a site for UAV and other ocean monitoring activities.

2014-17 Report

As outlined in Indicator 2.5, RDC advanced the Coastal Exposure Materials Testing Services site, from launch to full operation and revenue of \$51,000 in 2016-17.

REPORT ON 2016-17 OBJECTIVE

2016-17 Objective: By March 31, 2017, RDC will have undertaken activities to support increased business R&D in the province

DISCUSSION OF RESULTS

In 2016-17 RDC supported a higher number of business R&D projects (48) with lower investment value (\$9 million) than in previous years, in large part reflecting the downturn in economic conditions in the province over the same period. A majority of these projects involved business-academic collaboration, which is important for allowing businesses to access world-class expertise and reduce their cost of conducting R&D.

REPORT ON 2014-17 GOAL

Goal: By March 31, 2017, RDC will have provided support to increase business investment in R&D in Newfoundland and Labrador

Measure: Supported increased business investment in R&D

DISCUSSION OF RESULTS

The slowdown in investment by the business community in R&D was noticeable during the three year strategic plan period. This decline has led RDC to alter its funding approach to support more business R&D projects (i.e., from 33 in 2014-15 to 48 in 2016-17) with lower investment per project to ensure that as many R&D projects led by business can be supported as possible. Increased business-academia collaboration during this period, a requirement of many RDC programs, was a notable achievement as it helped businesses to access more affordable talent and facilities needed to conduct world-class R&D right here in the province. In addition, businesses were supported in hiring and developing 364 HQP for the performance of these 115 industry-relevant R&D projects.



GOULDING'S WHOLESAL LTD. WHIPPING UP A RECIPE OF INNOVATION

For Goulding's Wholesale Limited, owner and operator of Chatman's Bakery in Charlottetown, refining production techniques at their renowned bake shop is equally as important as perfecting the cookie recipes themselves. In fact, the cookie cutting process is at the heart of their operation, so when the bakery's official cookie cutter retired after fifteen years of cookie cutting, Goulding's quickly realized that they had a significant operational challenge to overcome.

With daily production reaching up to 25,000 cookies and the irresistible craving to expand their market reach, management understood that relying solely on manual operations was limiting

the bakery's growth potential. Innovative bakery techniques began sounding more and more tempting and soon they whipped up a modern cookie cutting concept that would allow them to move their idea of increased production closer to reality.

Initially, the company considered off-the-shelf technology; however, their traditional operation presented unique challenges in the production and packaging process that could not be solved through existing technology and it was decided that customization was key.

Through RDC's support, Goulding's contracted the Industrial Engagement Unit at the College of the North Atlantic to develop a



there's no stopping the growth of this small town operation



concept design and Proax Technologies to automate the unit, and after extensive time and effort, the team created a fully operational ultrasonic robotic cookie cutting system.

Not only is the manual cookie cutting obstacle behind them, this new technology has resulted in the hiring of a new mechanical engineering technologist, as well as increased efficiencies in the packaging process and improvements to the overall operation.

With a pinch of innovation, a spoonful of tenacity, and a dash of the secret ingredient, there's no stopping the growth of this small town operation. Chatman's Bakery has found the recipe for success.



NEWFOUNDLAND ENERGY
SERVICES LIMITED
TURNING
WASTE OIL
INTO **PROFIT**

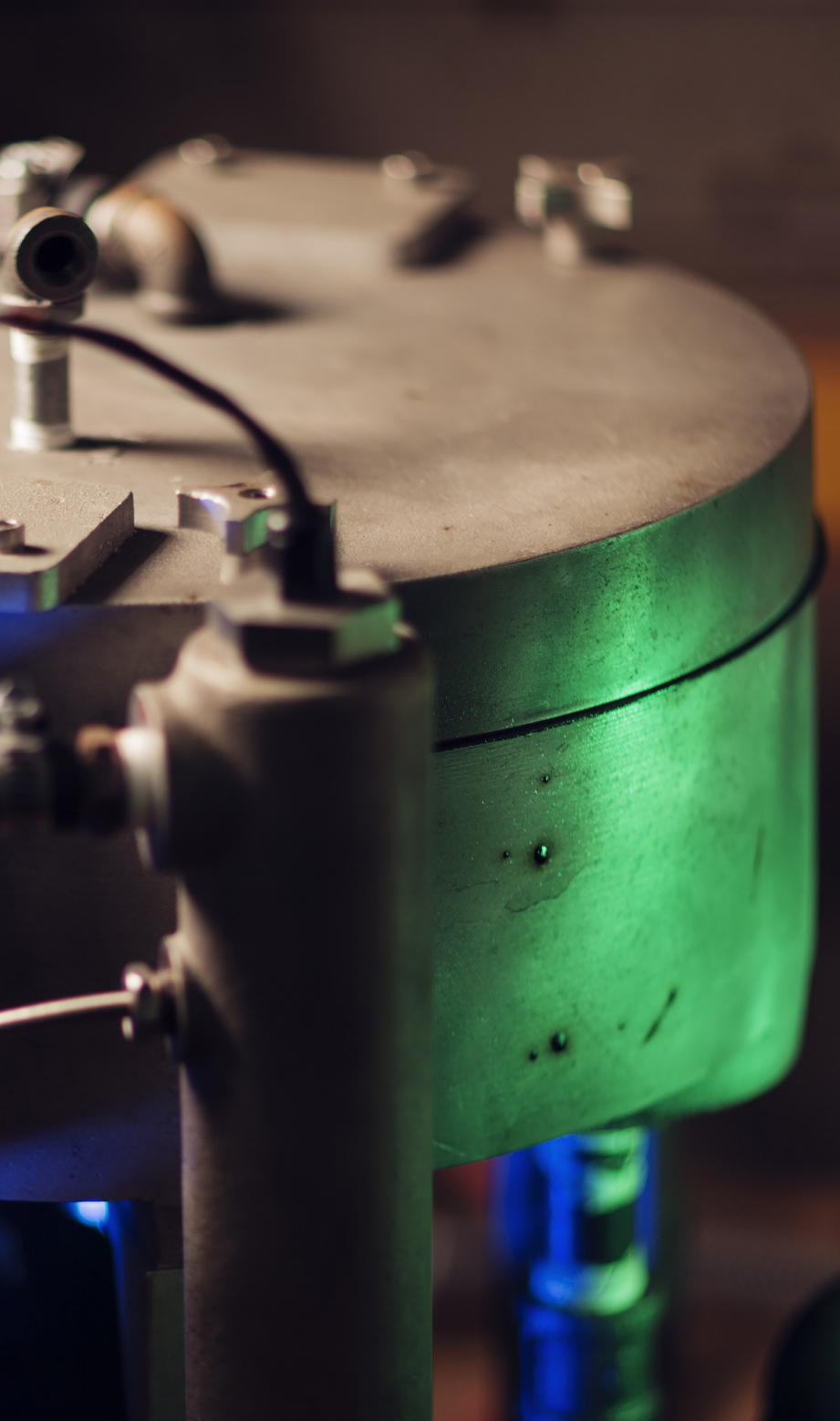
For Hubert Alacoque, owner of Pit Crew Drive Thru Services, running a busy drive-thru oil change operation means messy business. With an average vehicle oil change producing four litres of used motor oil, and up to 50 vehicles serviced per day, Pit Crew collects up to 120,000 litres of used motor oil each year.

Traditionally, the company hired a local waste management service company to dispose of the used oil, but the thought of continuing to pay to dispose of the potentially profitable product worked against their business goals.

With an investment from RDC, Hubert and Daniel Alacoque, his son and business partner at Newfoundland Energy Services Limited, began working on a concept to develop technology to clean, recycle and reprocess the waste oil generated at their two drive-thru facilities in St. John's.

An important objective of the project was to develop scalable processes whereby the waste oil reprocessing could take place at the location of the source of oil accumulation.

With overwhelming success, the project team has developed an oil



With overwhelming success, the project team has developed an oil treatment unit



treatment unit that uses centrifugation and heating to separate immiscible particles from the oil and then drains clean oil into portable storage containers.

All road blocks are now behind them and Newfoundland Energy Services is recycling and reusing the oil on-site. Furthermore, they are also selling and transporting reprocessed oil to local customers, and have taken this once financially burdensome product and turned it into profit.

For the father and son duo, they have their hands firmly on the steering wheel and are cruising in the fast lane.



OPPORTUNITIES AND CHALLENGES AHEAD



The success of RDC over the years has in large part been determined by the success of our clients. This past year we have consistently been encouraged by the innovative spirit and growing technical capacity in Newfoundland and Labrador.

The consolidation of provincial R&D supports with those across the broader innovation continuum provides many opportunities for the future. InnovateNL is the new entity established for delivery of provincial innovation programs and services which will include those currently offered by RDC. This approach will strengthen provincial collaboration and streamline client access to government entities. It will also provide a one-stop offering for clients through comprehensive end-to-end support in their journey from idea towards commercialization and ultimately business growth.

Perhaps the largest opportunity in this context is the growing recognition of the importance of R&D in creating an innovative economy. Over the past year the provincial and federal governments have both strongly committed to revitalizing their supports for innovation. InnovateNL will actively look for opportunities to leverage provincial and federal initiatives including those for R&D. Driving client outcomes towards a positive long-term economic impact on Newfoundland and Labrador remains the goal of the provincial government.

*we have consistently
been encouraged
by the innovative
spirit and growing
technical capacity in
Newfoundland and
Labrador*



FINANCIAL STATEMENTS



Management Certification

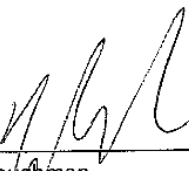
The accompanying financial statements of the Research & Development Corporation of Newfoundland and Labrador have been prepared by the Corporation's management in accordance with Canadian Public Sector Accounting Standards.

Management is responsible for the integrity and objectivity of the information contained in these financial statements, including the note disclosures. Some of the information in the financial statements is based on management's best estimate and judgment, and gives due consideration to materiality.


Management has developed and maintains a financial and management control system and practices designed to provide reasonable assurance that transactions are properly authorized, assets are safeguarded and liabilities are recognized.

Management is also responsible for ensuring that transactions comply with relevant policies and authorities and are properly recorded to produce timely and reliable financial information to maintain accountability of Research & Development Corporation of Newfoundland and Labrador funds.

The Board of Directors is responsible for ensuring that management fulfills its responsibilities for financial reporting and internal control and meets periodically with management to review and discuss the financial information. The Auditor General of Newfoundland and Labrador conducts an independent audit of the annual financial statements of the Research & Development Corporation of Newfoundland and Labrador in accordance with Canadian auditing standards in order to express an opinion thereon. The Auditor General has full and free access to the financial management of the Research & Development Corporation of Newfoundland and Labrador and meet when required.



Mark Ploughman
A/Chief Executive Officer



Levi May
Chief Financial Officer

St. John's, Newfoundland and Labrador
June 14, 2017

FINANCIAL STATEMENTS

RESEARCH & DEVELOPMENT CORPORATION OF NEWFOUNDLAND AND LABRADOR

STATEMENT OF FINANCIAL POSITION

As at

	March 31, 2017 \$	March 31, 2016 \$
FINANCIAL ASSETS		
Cash and cash equivalents	34,384,475	37,044,498
Receivables	20,342	31,122
	34,404,817	37,075,620
LIABILITIES		
Accounts payable and accrued liabilities (Note 6)	1,740,118	2,933,646
Deferred revenue	22,404	6,495
	1,762,522	2,940,141
Net Financial Assets	32,642,295	34,135,479
NON-FINANCIAL ASSETS		
Tangible capital assets, net (Note 7)	660,326	831,123
Prepaid expenses	42,902	27,831
	703,228	858,954
Accumulated surplus	33,345,523	34,994,433

Contractual obligations (Note 8)

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

Signed on behalf of the Board:

Director

Director

RESEARCH & DEVELOPMENT CORPORATION OF NEWFOUNDLAND AND LABRADOR

STATEMENT OF OPERATIONS

For the year ended

	March 31, 2017 \$	March 31, 2017 \$	March 31, 2016 \$
	Budget	Actual	Actual
	(Note 13)		
REVENUE			
Government grants	18,897,500	18,897,500	21,906,797
Investment income	423,435	434,952	476,717
Other income	50,000	9,706	4,378
	19,370,935	19,342,158	22,387,892
EXPENSES (Note 9)			
Program expenses – Academic	7,734,740	9,027,397	8,618,951
Program expenses – Business	7,997,127	8,617,595	10,396,064
R&D Solutions	814,951	587,554	623,405
Operating expenses	2,942,618	2,758,522	3,174,586
	19,489,436	20,991,068	22,813,006
(Deficit)	(118,501)	(1,648,910)	(425,114)
Accumulated surplus, beginning of year	34,994,433	34,994,433	35,419,547
Accumulated surplus, end of year	34,875,932	33,345,523	34,994,433

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

FINANCIAL STATEMENTS

RESEARCH & DEVELOPMENT CORPORATION OF NEWFOUNDLAND AND LABRADOR

STATEMENT OF CHANGE IN NET FINANCIAL ASSETS

For the year ended

	March 31, 2017 \$	March 31, 2017 \$	March 31, 2016 \$
	Budget	Actual	Actual
	(Note 13)		
(Deficit)	(118,501)	(1,648,910)	(425,114)
Acquisition of tangible capital assets	(100,000)	(48,304)	(40,549)
Amortization of tangible capital assets	221,769	219,101	275,053
	121,769	170,797	234,504
Acquisition of prepaid expenses	-	(95,786)	(55,754)
Use of prepaid expenses	-	80,715	84,079
	-	(15,071)	28,325
Increase (decrease) in net financial assets	3,268	(1,493,184)	(162,285)
Net financial assets, beginning of year	34,135,479	34,135,479	34,297,764
Net financial assets, end of year	34,138,747	32,642,295	34,135,479

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

RESEARCH & DEVELOPMENT CORPORATION OF NEWFOUNDLAND AND LABRADOR

STATEMENT OF CASH FLOWS

For the year ended

	March 31, 2017	March 31, 2016
	\$	\$
OPERATING TRANSACTIONS		
(Deficit)	(1,648,910)	(425,114)
Non-cash item		
Amortization of tangible capital assets	219,101	275,053
Decrease in receivables	10,780	22,666
Decrease (increase) in prepaid expenses	(15,071)	28,325
(Decrease) increase in accounts payable and accrued liabilities	(1,193,528)	616,043
Increase in deferred revenue	15,909	6,495
Cash (applied to) provided by operating transactions	(2,611,719)	523,468
CAPITAL TRANSACTIONS		
Acquisition of tangible capital assets (Note 7)	(48,304)	(40,549)
Cash applied to capital transactions	(48,304)	(40,549)
Net (decrease) increase in cash and cash equivalents	(2,660,023)	482,919
Cash and cash equivalents, beginning of year	37,044,498	36,561,579
Cash and cash equivalents, end of year	34,384,475	37,044,498

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

FINANCIAL STATEMENTS

RESEARCH & DEVELOPMENT CORPORATION OF NEWFOUNDLAND AND LABRADOR

NOTES TO FINANCIAL STATEMENTS

March 31, 2017

1. Nature of operations

The Research & Development Corporation of Newfoundland and Labrador (the Corporation) is incorporated under the authority of the *Research and Development Council Act (the Act)* and is funded by the Province of Newfoundland and Labrador (the Province). The *Act* came into effect December 18, 2009. The objective of the Corporation is to strengthen the focus, quantity, quality, and relevance of research and development (R&D) undertaken within the Province and elsewhere for the long-term economic benefit of the Province.

The affairs of the Corporation are managed by a Board of Directors (the Board) appointed by the Lieutenant-Governor in Council. The Corporation is a Crown entity of the Province and as such is not subject to Provincial or Federal income taxes.

2. Summary of significant accounting policies

These financial statements have been prepared by management in accordance with Canadian Public Sector Accounting Standards (CPSA Standards) which require management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. By their nature these estimates are subject to measurement uncertainty. The most significant item for which estimates are used is the useful life of tangible capital assets. The effect on the financial statements of a change in this estimate in future periods could be material and would be accounted for in the period the change occurs.

Basis of presentation

These financial statements include the accounts relating to the operations carried on under the name of the Corporation, and have been prepared by the Corporation's management in accordance with CPSA Standards.

Cash and cash equivalents

Cash and cash equivalents consists of cash in bank.

Revenue recognition

The Corporation recognizes the receipt of government transfers as revenue in the period the transfer is authorized and all eligibility criteria have been met, except when and to the extent that the transfer gives rise to an obligation that meets the definition of a liability for the Corporation. Investment income is recognized as earned. Revenue generated from the R&D Solutions line of business is included in other income and recognized in the period it is earned. Deferred revenue represents revenue invoiced but not earned.

RESEARCH & DEVELOPMENT CORPORATION OF NEWFOUNDLAND AND LABRADOR

NOTES TO FINANCIAL STATEMENTS

March 31, 2017

2. Summary of significant accounting policies (cont.)

Expenses

The Corporation recognizes expenses on an accrual basis. The cost of all goods consumed and services received during the period is expensed. Program grants are accounted for as government transfers and are recorded as expenses when they are authorized, when eligibility criteria have been met by the recipient, and when a reasonable estimate of the amount can be made.

Tangible capital assets

Tangible capital assets are recorded at cost and amortized on a straight-line basis over their estimated useful lives using the following terms:

	Term
Furniture and equipment	5 years
Computer hardware and software	2 years
Network infrastructure	4 years
Enterprise resource package software	3 years
Leasehold improvements	Lease term
Atmospheric corrosion test site	5 years

Tangible capital assets are written down when conditions indicate that they no longer contribute to the Corporation's ability to provide services or when the value of future economic benefits associated with the tangible capital assets is less than their net book value. The net write downs are accounted for as expenses in the statement of operations.

Pension costs

Employees of the Corporation are covered by the Public Service Pension Plan (the Plan) administered by the Public Service Pension Plan Corporation, the Government Money Purchase Plan administered by the Province or a self-directed RRSP. Contributions to each plan are required from the employees and are matched by the Corporation. The contributions for pensions are recognized during the period in which the services are rendered and represent the Corporation's total pension benefit obligation. The Plan provides defined pension benefits to employees based on their length of service and rates of pay. The maximum contribution rate for eligible employees is 11.85% (2016 – 11.85%). The Corporation is not required to make contributions in respect of any actuarial deficiencies of the Plan. Total pension expense for the Corporation for the period ended March 31, 2017 was \$264,349 (year ended March 31, 2016 - \$283,695).

FINANCIAL STATEMENTS

RESEARCH & DEVELOPMENT CORPORATION OF NEWFOUNDLAND AND LABRADOR

NOTES TO FINANCIAL STATEMENTS

March 31, 2017

3. Accounting pronouncements

There are several new standards issued by the Public Sector Accounting Board (PSAB) that are not yet effective and have not been applied in these financial statements. These standards and corresponding effective dates are as follows:

Effective April 1, 2017:

PS 2200 Related Party Disclosures – a new standard defining related parties and establishing disclosure requirements for related party transactions.

PS 3210 Assets – a new standard providing guidance for applying the definition of assets and establishing general disclosure requirements for assets but does not provide guidance for the recognition and disclosure of specific types of assets.

PS 3320 Contingent Assets – a new standard defining and establishing disclosure requirements for contingent assets but does not include disclosure standards for specific types of contingent assets.

PS 3380 Contractual Rights – a new standard defining and establishing disclosure requirements for contractual rights but does not include disclosure standards for specific types of contractual rights.

PS 3420 Inter-entity Transactions – a new standard on how to account for and report transactions between public sector entities that comprise a government's reporting entity from both a provider and recipient perspective.

Effective April 1, 2018:

PS 3430 Restructuring Transactions – a new standard on how to account for and report restructuring transactions by both transferors and recipients of assets and/or liabilities.

The Corporation plans to adopt these standards by the effective dates and is currently analyzing the impact these standards will have on the financial statements.

4. Risk management

The Corporation's management recognizes the importance of managing significant risks and this includes policies, procedures and oversight designed to reduce the risks identified to an appropriate threshold. The Board is provided with timely and relevant reports on the management of significant risks. The risks that the Corporation is exposed to through its financial instruments are credit risk, liquidity risk and market risk. There was no significant change to the Corporation's exposure to these risks or its processes for managing these risks from the prior year.

RESEARCH & DEVELOPMENT CORPORATION OF NEWFOUNDLAND AND LABRADOR

NOTES TO FINANCIAL STATEMENTS

March 31, 2017

4. Risk management (cont.)

Credit risk

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. The Corporation's main credit risk relates to cash and cash equivalents and receivables. The Corporation's maximum exposure to credit risk is the carrying amount of these financial instruments. The Corporation is not exposed to significant credit risk with its cash and cash equivalents because these financial instruments are held with a Chartered Bank. The Corporation is not exposed to significant credit risk with its receivables as these amounts are due primarily from a Chartered Bank or the Government of Canada. Accordingly there is no allowance for doubtful accounts as all amounts are considered collectible.

Liquidity risk

Liquidity risk is the risk that the Corporation will be unable to meet its contractual obligations and financial liabilities as they come due. The Corporation's exposure to liquidity risk relates mainly to its accounts payable and accrued liabilities and its contractual obligations as disclosed in Note 8. The Corporation manages liquidity risk by monitoring its cash flows and ensuring that it has sufficient resources available to meet its obligations and liabilities. The Corporation also has access to a credit facility as outlined in Note 12.

Market risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: currency (foreign exchange) risk, interest rate risk and other price risk. The Corporation is not exposed to significant foreign exchange, interest rate or other price risk.

5. Financial instruments

The Corporation's financial instruments recognized on the statement of financial position consist of cash and cash equivalents, receivables, and accounts payable and accrued liabilities. The Corporation generally recognizes a financial instrument when it enters into a contract which creates a financial asset or financial liability. Financial assets and financial liabilities are initially measured at cost, which is the fair value at the time of acquisition. The Corporation subsequently measures all of its financial assets and financial liabilities at cost.

The carrying value of cash and cash equivalents, receivables, and accounts payable and accrued liabilities approximate fair value due to their nature and the short-term maturity associated with these instruments.

Interest attributable to financial instruments is reported on the statement of operations.

FINANCIAL STATEMENTS

RESEARCH & DEVELOPMENT CORPORATION OF NEWFOUNDLAND AND LABRADOR

NOTES TO FINANCIAL STATEMENTS

March 31, 2017

6. Accounts payable and accrued liabilities

	March 31, 2017 \$	March 31, 2016 \$
Programs grants payable	1,072,814	2,289,601
Trade accounts payable & accruals	120,732	83,387
Payroll related accruals	546,572	560,658
	1,740,118	2,933,646

7. Tangible capital assets

	Leasehold Improve- ments \$	Furniture & Equipment \$	Computer Hardware & Software \$	Network Infrastructure \$	Enterprise Resource Package Software \$	Atmospheric Corrosion Test Site \$	Total \$
COST							
Balance, March 31, 2016	835,413	543,264	373,727	47,077	259,085	281,002	2,339,568
Additions	-	1,288	14,914	-	-	32,102	48,304
Balance March 31, 2017	835,413	544,552	388,641	47,077	259,085	313,104	2,387,872
ACCUMULATED AMORTIZATION							
Balance, March 31, 2016	313,280	451,819	356,302	47,077	259,085	80,882	1,508,445
Amortization expense	83,541	59,379	16,770	-	-	59,411	219,101
Balance, March 31, 2017	396,821	511,198	373,072	47,077	259,085	140,293	1,727,546
Net book value, March 31, 2017	438,592	33,354	15,569	-	-	172,811	660,326
Net book value, March 31, 2016	522,133	91,445	17,425	-	-	200,120	831,123

RESEARCH & DEVELOPMENT CORPORATION OF NEWFOUNDLAND AND LABRADOR

NOTES TO FINANCIAL STATEMENTS

March 31, 2017

8. Contractual obligations

The Corporation has outstanding contractual obligations under its various programs in respect of approved but not yet disbursed funds in the amount of \$31,808,814. The Corporation has also entered into a lease agreement for the rental of office space and various operating contracts totaling \$2,434,084. Approximate payment of these obligations in future years is as follows:

	Programs \$	Operating \$
2018	19,459,129	503,621
2019	6,614,158	477,107
2020	2,916,880	456,551
2021	1,766,910	443,455
2022	1,001,737	442,680
Thereafter	50,000	110,670
	31,808,814	2,434,084

9. Expenses

The statement of operations presents the expenses of the Corporation by function. The following table presents them by nature:

	March 31, 2017 \$	March 31, 2017 \$	March 31, 2016 \$
	Budget	Actual	Actual
	(Note 13)		
Program grants	13,790,000	15,868,665	17,282,900
Salaries and benefits	3,952,370	3,644,957	3,784,542
Purchased services	1,141,997	971,754	1,000,784
Professional services	383,300	286,591	469,727
Amortization of tangible capital assets	221,769	219,101	275,053
Total expenses	19,489,436	20,991,068	22,813,006

FINANCIAL STATEMENTS

RESEARCH & DEVELOPMENT CORPORATION OF NEWFOUNDLAND AND LABRADOR

NOTES TO FINANCIAL STATEMENTS

March 31, 2017

10. Related party transactions

These financial statements include transactions with related parties. The Corporation is related, as a result of common ownership, to all Crown corporations and agencies of the Province.

During the period, the Corporation had the following related party transactions:

- Program grants expense to related parties of \$8,277,132 (year ended March 31, 2016 - \$7,996,471).
- Purchased supplies and services from related parties for \$731,724 (year ended March 31, 2016 - \$509,413).

11. Economic dependence

As a result of the Corporation's reliance on funding from the Province, the Corporation's ability to continue viable operations is dependent upon the decisions of the Province.

12. Credit facilities

Subject to the prior approval of the Lieutenant-Governor in Council and the Board, the Corporation may borrow money for purposes related to the attainment of its objectives as set out in the *Act*. At March 31, 2017, the Corporation had available a revolving credit facility of up to \$1,000,000 bearing interest at prime, a letter of credit of up to \$50,000 bearing interest at 1%, and VISA business card(s) with an aggregate limit of \$50,000. At March 31, 2017 the credit facility, letter of credit, and the VISA business card(s) are inactive.

13. Budgeted figures

Budgeted figures have been provided for comparison purposes and have been derived from the original estimates approved by the Board.



R E A S E A R C H & D E V E L O P M E N T C O R P O R A T I O N

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