



**KRAKEN ROBOTICS INC.  
MANAGEMENT DISCUSSION AND ANALYSIS  
FOR THE YEAR ENDED DECEMBER 31, 2018**

*This Management Discussion and Analysis (“MD&A”) of Kraken Robotics Inc. (the “Company” or “Kraken”) provides analysis of the Company’s financial results for the year ended December 31, 2018 and should be read in conjunction with the Company’s audited consolidated financial statements and the notes thereto for the year ended December 31, 2018, which are available on SEDAR at [www.sedar.com](http://www.sedar.com). This MD&A is current as at May 9, 2019, the date of preparation.*

*The December 31, 2018 financial statements have been prepared in accordance with International Financial Reporting Standards (“IFRS”). All amounts are expressed in Canadian dollars, unless otherwise stated.*

**Forward-Looking Statements**

*Certain statements contained in the following MD&A constitute forward-looking statements. Such forward-looking statements involve a number of known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements.*

**NATURE OF BUSINESS**

Kraken Robotics Inc. (formerly Kraken Sonar Inc.) was incorporated on May 14, 2008 under the Business Corporations Act, British Columbia, is a publicly traded company, and its registered office is at 100 King Street West, #1600, Toronto, Ontario, M5X 1G5

The Company’s principal business is the design, manufacture and sale of software centric sensors and underwater robotic systems.

**Company Overview**

Kraken Robotics Inc. (PNG: TSX-V) is a marine technology company supplying advanced sonar and optical sensors and underwater robotics equipment for military and commercial applications. The Company is recognized as world leading innovators of Synthetic Aperture Sonar (SAS) - a revolutionary underwater imaging technology that dramatically improves seabed surveys by providing ultra-high resolution imagery at superior coverage rates. Both military and commercial markets are showing encouraging growth as they are now incorporating unmanned vehicles and intelligent sensors in their procurement plans and budgets.

**AQUAPIX® MINSAS SENSOR FOR UNDERWATER VEHICLES**

The AquaPix® MINSAS (Miniature Interferometric Synthetic Aperture Sonar) sensor is based upon Kraken’s core Synthetic Aperture Sonar technology. The MINSAS compact receiver array length of only 60cm provides high-resolution 3cm x 3cm imagery at ranges up to 120m per side. The lightweight array is integrated into a modular payload section of less than eight-inch diameter, which can be easily mobilized in customers’ Unmanned Underwater Vehicles (UUVs) of all sizes. The MINSAS payload section also includes Kraken’s latest generation Real Time SAS Processor, the RTSAS MK-II. The RTSAS enables real-time, onboard processing of SAS imagery and bathymetry at full resolution and allows operators to leverage Kraken’s suite of post-processing tools, including the newly developed SASView 3D sonar visualization and control software. The MINSAS plus RTSAS provides operators with an area coverage rate of higher than 3km<sup>2</sup> per hour at full SAS resolution, enabling highly efficient survey operations.

During 2018, Kraken delivered several MINSAS sensors to customers for integration onto their AUVs. These included several defense contractors as well as Ocean Infinity, the company’s largest commercial customer.

In the first half of 2019, Kraken successfully tested its AquaPix® MINSAS 60 sensor on a two-man portable AUV for a potential defense customer. The Company expects to be awarded a U. S. FCT (Foreign Comparative Test) contract related to this in

2019 which will see Kraken engineer the size, weight, and power consumption lower to better address the unique needs of this customer platform.

During 2018, Kraken announced the development of the AquaPix® MINSAS Multispectral synthetic aperture sensor, an ultra-wideband acoustic remote sensing system for seafloor imaging and mapping. The AquaPix® Multispectral Synthetic Aperture Sonar (SAS) will be the world's first commercial SAS to operate over such a wide spectrum, ranging from low audible frequencies to high ultrasonic frequencies. Three notable benefits of this technology include:

- Significantly extended search range at constant high-resolution seabed pixels;
- Sub-bottom 3D volumetric imaging (i.e. finding objects buried beneath the seafloor); and,
- Increased speed and accuracy for seabed classification and characterization.

### ***SEAVISION® 3D LASER SYSTEM FOR UNDERWATER VEHICLES***

Kraken Robotik GmbH ("KRG"), a wholly-owned subsidiary of the Company, commenced operations in January 2017 in Bremen, Germany. Its focus is the development of 3D imaging sensors, machine learning, and artificial intelligence (AI) algorithms for underwater robotic platforms.

KRG, with support from Kraken engineers in Canada, has developed the SeaVision® 3D laser system. SeaVision® is the world's first RGB underwater laser imaging system that offers the resolution, range and scan rate to deliver dense full colour 3D point cloud images of subsea infrastructure with millimetre accuracy, in real time. The ability to generate accurate 3D reconstruction of underwater infrastructure is an important requirement for commercial, military and ocean research applications. The initial system is designed for deployment on underwater robotic platforms such as Remotely Operated Vehicles (ROVs) and AUVs. Kraken has seen significant interest in SeaVision® from customers across many industries from defense to oil and gas, to renewable energy and nuclear. The Company is currently building SeaVision inventory for shipment for customer trials and demos. During 2018, Kraken had a number of positive developments with respect to SeaVision®. These included:

- Notification by the Government of Canada that Kraken's SeaVision® underwater 3D laser imaging system has been pre-qualified for the Build in Canada Innovation Program (BCIP). This is the second BCIP application that Kraken has had pre-qualified by the Government of Canada. Through the BCIP, companies can sell their pre-qualified innovations to the federal government as their first reference sale. Kraken expects its test partner to be Parks Canada which will test SeaVision® on marine archaeology projects. The BCIP program pays up to C\$500,000 for non-military innovations. Due to a backlog with the government contracting agency, Kraken now expects this contract will not be finalized until the second half of 2019.
- KRG secured over \$900,000 in funding for two development initiatives for evaluation of SeaVision® sensors and AI control software for AUV. The two projects, ARIM and RoboVaaS, are collaborative research activities funded by the German Federal Ministry for Economic Affairs and Energy as part of the MarTERA Horizon 2020 initiative of the European Commission. Both projects will use Kraken's innovative SeaVision® sensor for monitoring and inspection services and autonomous vehicle control. The contracts started in June 2018 and continue over a period of 36 months.
- Received first commercial product order of SeaVision® product for a European customer in Q2/2018. Shipment occurred in Q1/2019. The contract is valued at approximately \$0.1 million.
- Completed project activity under a \$750,000 oil and gas contract announced by the Company in November 2017. Contract funding was provided by Petroleum Research Newfoundland and Labrador (PRNL), InnovateNL and industry partners (including Avitas, a GE Venture company). Under the contract, Kraken integrated its SeaVision™ 3D laser imaging sensor and underwater robotics technologies with a cloud-based data analytics infrastructure to demonstrate an end-to-end digitalization methodology for subsea asset integrity management.
- Completed customer trials with offshore oil and gas companies in Canada and the U.S for subsea asset inspection applications.

### ***KATFISH™ TOWED UNDERWATER VEHICLE***

After a multi-year development effort, the Company has developed the Kraken Active Towed Fish (KATFISH™) for high speed, high resolution seabed mapping. The system enables real-time seabed imagery, bathymetry and advanced 3D digital terrain models of the seabed – optimized for both manned and unmanned surface vessels.

KATFISH™ is a high resolution, high speed seabed imaging platform. Coupled with Kraken's revolutionary AquaPix® MINSAS, it is especially well-suited for both military and commercial seabed surveys. Kraken's KATFISH™ product offering lists for US\$1.5 million (Commercial Off The Shelf: COTS) to US\$2.5 million (Military Standard: MIL-STD).

In the commercial seabed survey market, KATFISH™ offers offshore energy companies the advantage of comprehensive, high-resolution surveys of existing infrastructure, such as pipelines and subsea stations, completed in at least half the time as more conventional methods. KATFISH™ operates at speeds up to 10 knots, versus the slow moving 1-2 knots of ROV or the medium 3-4 knots of the passively stable sonar systems, thus reducing operating time and cost.

In the defence market, there is a growing global requirement for modernization of mine countermeasure (MCM) solutions. The previous generation of single-role mine hunting vessels designed and built between the 1970's - 1990's are now being withdrawn from service. This leaves a growing requirement for high resolution, high speed seabed imaging platforms.

The ability of the KATFISH™ platform to generate centimetre-scale sonar resolution in all three dimensions can provide significant improvement in the detection, classification and identification of small seabed objects for both military and commercial seabed survey missions.

In May 2018, Kraken announced that it had successfully completed military standard certification testing of the KATFISH-M, a ruggedized version of Kraken's KATFISH™ Towed Synthetic Aperture Sonar Platform. KATFISH-M was tested and certified by independent laboratories on a variety of United States Department of Defense military ruggedization standards known as MIL-STD-810G and MIL-STD-461. The MIL-STD-810G focuses on environmental engineering and requires products to pass a series of laboratory tests to ensure that military equipment can operate in extreme worldwide environments. The MIL-STD-461 standard covers the requirements and test limits for the measurement and determination of the electromagnetic interference characteristics (emission and susceptibility) of electronic, electrical, and electromechanical equipment.

During Q3, Kraken announced that it has signed a Cooperative Research and Development Agreement (CRADA) with the U.S. Navy's Naval Underwater Warfare Center – Division Newport (NUWC DIVNPT). Kraken completed successful testing of the KATFISH™ with NUWC off of Rhode Island. At the end of August, Kraken showcased its KATFISH-M at the Advanced Naval Technology Exercise (ANTX) in the United States. ANTX is an annual, invitation-only event that was created by the U.S. Navy to see the future of naval technology in action today.

In addition, during Q3 Kraken announced that it has signed a CRADA with the Office of Ocean Exploration and Research (OER) of the National Oceanic and Atmospheric Administration (NOAA). This CRADA will see the testing of Kraken's AquaPix® MINSAS aboard a towed system (KATFISH™) on a NOAA vessel resulting in the high-resolution imaging of several historic sunken submarines and ships.

At December 31, 2018, Kraken had completed three KATFISH™, one of which is still owned by Kraken and is being used for trials and demonstrations.

Kraken has high expectations for the KATFISH™ which provides high performance underwater mapping and mine hunting capabilities from a towed platform for both the military and commercial markets. The Company has partnered as a supplier to several large defense contractors who are involved in various multi-unit bids, most of which are expecting contract award in 2019 and the first half of 2020.

### ***THUNDERFISH® AUTONOMOUS UNDERWATER VEHICLE (AUV)***

Kraken continues its ThunderFish® AUV development program. The ThunderFish® AUV is a technical upgrade of Fraunhofer's DeDave AUV, however it is still a prototype. Kraken will pay Fraunhofer a royalty based on a percentage of each sale with minimum commitments starting in 2022. Kraken is exclusively licensing Fraunhofer software and hardware IP and technology for large AUVs.

Fraunhofer is the largest organization for applied research in Europe with 69 institutes, over 24,500 employees and a €2.1 billion annual budget. Since 2012, Fraunhofer has been developing intellectual property and technology related to underwater robotics. Over C\$6 million has been invested in Fraunhofer's underwater sensor robotics programs, culminating in the development of the DeDave.

In late June 2017, the Company took delivery of the 6000m rated DeDave AUV which Kraken rebranded ThunderFish® Alpha AUV. This AUV is designed for deep sea military, commercial and scientific applications for use as a sensor and robotics technology demonstration platform to support ongoing development of the Company's underwater sensor and robotics programs. To the end of December 2018, Kraken had paid total cost Euro 1,000,000 for the acquisition of the AUV.

Kraken has established a long-term technical co-operation program with Fraunhofer for technologies that can be deployed in Kraken's ThunderFish® AUV program. While Kraken intends to grant research and development projects to Fraunhofer of €300,000 per year for a period of three more years (2019-2021), these projects will be awarded to Fraunhofer as various statement of works are agreed upon and purchase orders issued. These projects will be expensed as incurred. At December 31, 2018, Kraken has paid €25,000 towards the research and development projects to Fraunhofer. At December 31, 2018 an amount of €100,000 (C\$156,130) was included in trade payables for these projects, and €56,640 (\$88,432) in accrued liabilities.

In April 2018, Kraken announced that its ThunderFish® 300, a shallow water version of its AUV had been pre-qualified under the Canada's Build in Canada Innovation Program (BCIP). Through the BCIP, companies can sell their pre-qualified innovations to the federal government as their first reference sale. After testing a company's innovation, federal departments provide feedback on the innovation's performance in an operational setting. The program pays up to \$1 million for military innovations. While Kraken had finalized the Statement of Work, there were delays due to a backlog with the government contracting agency and Kraken's BCIP contract was not finalized until Q2 2019.

### ***AUTONOMOUS LAUNCH AND RECOVERY SYSTEMS (ALARS)***

Launch and recovery of equipment offshore is one of the most dangerous phases of any ROV or AUV operation. Through the hiring of former Rolls Royce Marine employees in 2016, Kraken's Handling Systems Division has an experienced LARS engineering team with a proven track record. This group has spent more than two years in R&D mode, working on both an intelligent winch system (TENTACLE™ and an autonomous LARS system that can launch AUVs from vessels, host facilities and docking stations. Kraken expects its winch and ALARS products will range in price from \$200,000 to \$1 million. This group's capabilities are integral to various customer opportunities that Kraken is involved in or pursuing.

During 2018, Kraken successfully demonstrated its Tentacle™ Intelligent Winch as part of a fully integrated SeaScout® service offering with ThayerMahan Inc. at the US Navy's ANTX event in Rhode Island. SeaScout® consists of KATFISH™, TENTACLE™, real time sea floor secure imagery transmission and cloud-based data analytics.

### ***ROBOTICS AS A SERVICE (RaaS)***

Kraken believes that certain customers would prefer to hire the company to provide product output (i.e. imaging and bathymetry data) to them using the Kraken's own equipment, rather than the customer buying the equipment and having to own and operate and maintain the equipment. This is the genesis of Kraken's RaaS offering. Kraken expects RaaS to become a growing part of its revenue mix over time. Kraken will provide RaaS services to customers using Kraken's KATFISH™ towed underwater vehicles and ThunderFish® AUV.

While RaaS revenue in 2018 was less than 5% of revenue, Kraken is bidding on opportunities involving both shallow and deeper water surveys with both KATFFISH™ and ThunderFish® as well as our SeaVision® 3D laser system. Kraken believes its relationship with Ocean Infinity Limited could result in a significant uptick in RaaS revenue in time in partnership with companies like Ocean Infinity. In addition, the Company OceanVision™ project proposal to the Ocean Supercluster is focused on the development of a RaaS offering for underwater seabed imagery and mapping. Should this proposal be chosen for funding, the Company expects a significant step forward for its RaaS service capabilities. Finally, Kraken is in discussions with

various partners around the potential sharing of service revenues in return for access to certain of Kraken's technologies. Should these discussions bear fruit, Kraken expects a material uptick in RaaS revenue in the 2020 timeframe onwards.

### ***OCEAN SUPERCLUSTER***

On November 16, 2018, the Ocean Supercluster announced that it had finalized its funding agreement with the Government of Canada for \$153 million, to be matched by industry, for a total funding pool of over \$300 million. Kraken has been developing a project called OceanVision™ and in April 2019 submitted a detailed proposal for Ocean Supercluster funding. OceanVision™ is approximately a \$23 million three-year initiative to provide ultra-high definition seabed and subsea asset data using the AquaPix® Synthetic Aperture Sonar and SeaVision® 3D laser imaging sensors deployed from Kraken's various underwater robotic platforms. These datasets will be used to enhance machine learning and predictive analytics in the digital ocean economy. The project will provide benefits across a wide range of Ocean Supercluster constituents including oil and gas, fisheries, science, transport, defence and others. Kraken has been developing the OceanVision™ project over the past year and believes it has support from a number of the key stakeholders. The OceanVision™ project will be used to further develop the system infrastructure, data sharing and business model development that will enable Kraken to offer its Robotics-as-a-Service to the global market. It is expected that first project awards will be announced in Q2 2019. While there is no guarantee Kraken will be awarded funding for this project, management believes the OceanVision™ project is well positioned to meet the goals and requirements for Supercluster funding proposals.

### ***KRAKEN POWER GMBH***

In May 2017, Kraken acquired a minority interest in ENITECH Subsea GmbH of Rostock, Germany, which was renamed Kraken Power GmbH ("Kraken Power"). Under the agreement, Kraken had taken a 19.9% equity interest and provided a €110,000 (\$165,220) convertible loan. After conversion of its loan and interest, Kraken paid an additional €111,200 (\$167,022) to increase its ownership stake in Kraken Power to 75%. The remaining 25% of Kraken Power is owned by the spouse of Kraken Power's CTO.

Kraken Power GmbH designs and manufactures unique pressure tolerant thrusters, drives, batteries, battery management systems, and electronics. These are specialized deep-sea components for AUVs and ROVs. Kraken Power's unique pressure tolerant gel encapsulation technology for lithium polymer batteries provides an attractively priced, eco-friendly and superior alternative to oil compensated batteries currently used for subsea battery applications. Kraken Power's technology and products enable a significant reduction in bill of material costs for our ThunderFish® AUV.

Under a \$9 million deep-sea battery contract announced on August 1, 2018, Ocean Infinity issued the first purchase order of \$2.5 million to Kraken followed by a second \$6.5 million purchase order in Q4 2018. As part of this second purchase order, Kraken will deliver batteries for five new Kongsberg Hugin AUVs recently purchased by Ocean Infinity, for integration at the manufacturer's facility in Norway. Kraken expects a follow-on order from Ocean Infinity in the second half of 2019 for additional batteries and spares, beyond the initial \$9 million contract, such that all of Ocean Infinity's AUV fleet will have Kraken batteries inside.

Ocean Infinity has noted that by using Kraken's battery technology, "we can increase our energy capacity by over 50% in the same physical form factor as our existing conventional batteries. From an operational perspective this gives us considerable flexibility to optimise mission plans, increase area coverage, manage weather impact and ultimately increase value for our customers."

On issuing the initial purchase order to Kraken Power and transferring initial funds to finance the contract on August 14, 2018, the Company determined that it has the practical ability to direct the relevant activities of Kraken Power and has consolidated Kraken Power with a 25% non-controlling interest, effective August 14, 2018. In December 2018, the loan and interest were converted and the additional payment of €111,200 (\$167,022) was made to effect the transaction.

## FINANCIAL CONTRIBUTIONS AWARDED

Kraken started 2018 with \$1,633,557 of non-refundable financial contributions available from awards in previous years. During 2018, an additional \$1,538,251 was awarded by governmental agencies which are being used to support the development of the Company's underwater robotics program. During 2018, the Company had drawn down assistance totaling \$1,240,794 leaving \$1,931,014 at December 31, 2018 remaining to fund research and development activities. Major components of this remaining funding are as follows:

In May 2017, the Company announced that it has been awarded a non-refundable financial contribution of \$745,950 by the Research & Development Corporation (RDC) of Newfoundland and Labrador. Funding will support development of Kraken's ThunderFish® AUV program. The ThunderFish® program will combine smart sonar, laser and optical sensors, advanced pressure tolerant battery and thruster technologies and cutting edge artificial intelligence algorithms integrated onboard a cost effective 6,000 metre depth rated AUV.

On November 2017, the Company entered into a commercial contract with Petroleum Research Newfoundland and Labrador (PRNL) that includes funding from General Electric Oil and Gas and Innovate Newfoundland and Labrador. As part of this agreement, a non-refundable financial contribution from Innovate Newfoundland and Labrador of \$248,324 will be received. Kraken is working with General Electric Oil & Gas to merge Kraken's next generation sensors and underwater robotics, with GE Avitas' cloud-based data analytics infrastructure, demonstrating an end-to-end digitized concept of operations for subsea asset integrity management.

In May 2018, the Company's German subsidiary, Kraken Robotik GmbH was awarded over \$900,000 in contracts for two development initiatives for evaluation of SeaVision® sensors and AI control for software for autonomous underwater vehicles. The two projects are called ARIM and RoboVaaS and are collaborative research activities funded by the German Federal Ministry for Economic Affairs and Energy as part of the MarTERA Horizon 2020 initiative of the European Commission.

In December 2018, the Company was awarded a \$565,000 contract with Public Works and Procurement Canada under the Defence Innovation Research Program (DIRP). Kraken will develop a low frequency, ultra-wideband Synthetic Aperture Sonar (SAS) for use in underwater operational environments.

## RESULTS OF OPERATIONS

### Selected Annual Information

	Year Ended December 31, 2018 (\$)	Year Ended December 31, 2017 (\$)	Year Ended December 31, 2016 (\$)	Year Ended December 31, 2015 (\$)
<b>Statement of Comprehensive Loss</b>				
Total Revenues	6,707,956	3,533,605	2,267,818	1,893,299
Cost of Sales	3,902,538	1,936,463	1,017,992	960,542
Loss from operating activities	(3,982,668)	(3,006,573)	(1,403,388)	(1,784,625)
Net loss	(2,852,389)	(2,397,229)	(1,420,175)	(1,992,410)
Basic and diluted loss per share	(0.03)	(0.03)	(0.02)	(0.03)

	Year Ended December 31, 2018 (\$)	Year Ended December 31, 2017 (\$)	Year Ended December 31, 2016 (\$)	Year Ended December 31, 2015 (\$)
<b>Statement of Financial Position</b>				
Total Assets	14,028,465	5,258,148	2,188,578	2,042,676
Total Current Assets	9,738,966	3,458,421	1,771,898	1,857,733
Total Current Liabilities	4,815,590	4,722,736	1,416,353	1,074,373
Total Liabilities	5,731,030	4,722,736	1,416,353	1,074,373
Total Shareholders' Equity (Deficiency)	8,297,435	535,412	772,225	968,303

The Company incurred a loss of \$2,852,389 for the year ended December 31, 2018, as compared with a loss of \$2,397,229 for the year ended December 31, 2017. Share-based payments of \$342,600 (2017 - \$275,600) were recorded upon the grant of incentive stock options pursuant to the Company's incentive stock option plan.

During 2018, the Company continued to ramp-up its business activities, which included increasing its minority interest in Kraken Power from 19.99% to a majority control position of 75%. Administrative expenses increased 62% with those of the prior year at \$4,396,838 (2017 - \$2,722,486). Research and Development costs, net of related government assistance increased 23% over the prior year at \$2,369,455 (2017 - \$1,923,738).

No cash dividends have been declared or paid since the date of incorporation and the Company has no present intention of paying dividends on its common shares. The Company anticipates that all available funds will be used to finance the growth of its business.

### Summary of Quarterly Information

Selected financial information for each of the eight most recently completed quarters are as follows:

	Revenue (\$)	Operating expenses (\$)	Share-based payments (\$)	Net income (loss) (\$)	Comprehensive (loss) \$	Basic and diluted income (loss) per share (\$)
Q4 2018	1,406,974	1,724,071	141,100	(567,534)	(457,407)	(0.00)
Q3 2018	1,574,335	2,115,154	90,100	(1,466,369)	(1,482,352)	(0.01)
Q2 2018	3,726,647	1,509,146	85,300	638,441	647,759	0.01
Q1 2018	-	1,097,115	26,100	(1,456,927)	(1,628,340)	(0.02)
Q4 2017	1,539,526	1,220,445	144,900	(673,135)	(732,957)	(0.01)
Q3 2017	1,585,664	1,018,855	18,100	109,712	(42,860)	(0.00)
Q2 2017	161,917	835,669	73,600	(1,115,902)	(1,175,008)	(0.01)
Q1 2017	246,498	1,271,246	39,000	(717,904)	(717,904)	(0.01)

Comparative balance sheet information for 2018 and 2017 is presented below:

	Total Assets (\$)	Total Current Assets (\$)	Total Current Liabilities (\$)	Total Liabilities (\$)
Q4 2018	14,028,465	9,738,966	4,815,590	5,731,030
Q3 2018	9,401,124	5,299,390	5,790,272	7,114,072
Q2 2018	8,097,893	6,401,801	5,920,830	5,920,830
Q1 2018	5,693,665	3,939,755	6,540,189	6,540,189
Q4 2017	5,258,148	3,458,421	4,722,736	4,722,736
Q3 2017	5,032,126	3,070,138	3,955,656	3,955,656
Q2 2017	3,661,117	1,670,790	2,559,887	2,559,887
Q1 2017	2,268,631	1,977,338	2,120,310	2,120,310

### Three Months Ended December 31, 2018

The Company recorded revenues of \$1,406,974 (2017 - \$1,539,526) from product sales and services, marking a decrease of \$132,552 over the same period of the prior year. Product revenue totaled \$1,356,331 (2017 - \$1,457,808) and Service revenue totaled \$50,643 (2017 - \$81,718). The Company's revenue can fluctuate significantly on a quarterly basis mainly due to the timing of orders and lead times on parts purchases. In addition, change in revenue is also impacted by the adoption of IFRS 15 as noted on page 14. The Company has not reached the stage yet where it has a steady flow of contracts being fulfilled each quarter. Q4 2018 revenues were down year over year as the Company's product sales in progress did not meet the criteria under IFRS 15 to allow for the recognition of revenue. This resulted in substantially higher deferred revenues of \$2,920,812 (2017 - \$491,266). The deferred revenues represent customer advances on product orders.

Cost of sales was lower than that of the prior year at \$732,147 (2017 - \$841,025). The Company realized gross profit of \$674,821 (2017 - \$698,501). Gross margin for the quarter was 48%, as compared to negative 234%, 62%, and 3% in the first, second and third quarters, respectively. Gross margins increased year-over-year due to efficiencies in production during the quarter. Our product gross margins generally range from 45%-75% while overall gross margin percentages are lower as labor costs get allocated to cost of sales.

The Company recorded a comprehensive net loss of \$569,300 for the three months ended December 31, 2018, as compared to a comprehensive net loss of \$732,957 for the same period of prior year. An amount of \$1,766 (2017 - \$59,823) is attributable to cumulative translation adjustment arising from the translation of the German subsidiary's financial statements into Canadian dollar presentation currency of the parent company.

Administrative expenses increased by \$791,765 in the quarter to \$1,747,741 (2017 - \$955,976) due to both an increase in headcount and various administrative expenses such as facilities and public company costs. This amount included travel related costs of \$155,020 (2017 - \$50,927), rent of \$117,822 (2017 - \$62,644), public company costs/transfer agency services fees of \$38,509 (2017 - \$70,607). Accounting and legal costs incurred totaled \$186,020 versus \$75,910 in the prior year. During the quarter the Company realized a foreign exchange gain of \$109,251 (2017 - \$6,351 foreign exchange gain). A gain on acquisition was realized during the quarter of \$398,937 (2017 - \$Nil) as well as a deferred income tax recovery resulting from the acquisition of \$111,705 (2017 - \$Nil). In addition, Intangible amortization of \$282,090 (2017 - \$Nil) was also included in administrative expenses resulting from the acquisition.

Research and development costs ("R&D") costs were lower than those of the fourth quarter in the prior year, totaling \$(23,670) (2017 - \$518,552), as a result of the timing of expenditures on various R&D programs.

Employee costs, which previously captured all Salaries and Wages, and Government Assistance (which was recorded as a recovery of Administrative Expenses) are now both allocated to Cost of Sales, Administrative Costs, and Research and Development Costs in 2018, 2017 and 2016. This reclassification has resulted in changes to the operating expenses reported in prior periods for Research and Development Costs, Administrative Expense, and Cost of Sales on the financial statements.

Government assistance totaled \$611,748 (2017 - \$688,811) during the quarter and was applied against Costs of Sales and R&D expenses.

Share-based compensation of \$141,100 was recorded, representing the fair value of the options that vested during the three months ended December 31, 2018. During the same period of the prior year, the Company recorded stock-based compensation of \$144,900.

### ***Twelve Months Ended December 31, 2018***

The Company recorded revenues of \$6,707,956 (2017 - \$3,533,605) from product sales and services, marking an increase of \$3,174,351 or 190% growth from the prior year. The increase in revenue is due to an increase in contract awards for products in 2018 as well as changes to adoption of IFRS 15 revenue recognition as noted on page 14. At year end, deferred revenues totaled \$2,920,812 (2017 - \$491,266).

Cost of sales increased from that of the prior year at \$3,902,538 (2017 - \$1,936,463). The Company recorded gross profits of \$2,805,418 (2017 - \$1,597,142), marking an increase of \$1,208,276 over the prior year. Gross margins for the year decreased slightly to 42% over the prior year margins of 45%. Our product gross margins generally range from 45%-75% while overall gross margin percentages are lower as labor costs get allocated to cost of sales. The decrease in gross margin year over year can be largely attributed to a higher proportion of revenue from systems sales (versus sensors) as well as some cost inefficiencies (in materials and labor) as we start initial production of new systems products.

The Company recorded a comprehensive loss of \$2,920,340 for the year ended December 31, 2018, as compared to a comprehensive loss of \$2,668,730 for the prior fiscal year.

Administrative expenses incurred during the period totaled \$4,396,838 (2017 - \$2,722,486), marking an increase of \$1,674,352 over the prior fiscal year. This amount included accounting and legal costs of \$443,870 (2017 - \$220,808) rent of \$388,727 (2017 - \$356,720), travel related costs of \$572,300 (2017 - \$250,461), public company/transfer agency services fees of \$187,892 (2017 - \$275,899) and advertising and promotion of \$58,402 (2017 - \$49,732), most of which are higher due to corporate expansion during 2018. During the year, the Company realized a foreign exchange loss of \$15,764 (2017 - \$66,593). A gain on acquisition was realized during the year of \$1,076,530 (2017 - \$Nil) as well as a deferred income tax

recovery resulting from the acquisition of \$111,705 (2017 - \$Nil). In addition, Intangible amortization of \$282,090 (2017 - \$Nil) was also included in administrative expenses resulting from the acquisition.

Research and development costs (“R&D”) costs totaled \$2,369,455 (2018 - \$1,955,886) – representing a 21% increase over the same period of the prior year. The Company has multiple R&D programs underway – Multispectral SAS, SeaVision®, ALARS, ThunderFish®, ARIM and RoboVaaS.

Government assistance totaled \$1,417,334 (2017 - \$1,566,940) during 2018.

Share-based compensation of \$342,600 (2017 - \$275,600) was recorded representing the fair value of the options that vested during 2018.

## **LIQUIDITY AND CAPITAL RESOURCES**

At December 31, 2018, the Company had working capital of \$4,923,376 (2017 – working capital deficit of \$1,264,315). Cash and cash equivalents as at December 31, 2018 was \$4,929,865, as compared with \$Nil at December 31, 2017.

During June 2018 the Company closed a non-brokered private placement of 11,520,000 units (the “Units”) to Ocean Infinity Ltd at a purchase price of \$0.20 per Unit for aggregate gross proceeds of \$2,304,000. Each Unit consisted of one common share and one-half of one common share purchase warrant (each whole common share purchase warrant, a “Warrant”), with each Warrant exercisable to acquire one common share at \$0.40 for a period of 36 months from the date of issuance

During December 2018 the Company closed a bought deal short form prospectus offering of common shares of the Company. A total of 15,000,000 common shares were sold at a price of \$0.40 per common share for gross proceeds of \$6,000,000. The Company paid the underwriters a cash commission equal to 6% of the gross proceeds and issued 550,000 compensation options to the underwriters. Each compensation option entitles the holder to purchase one common share at a price of \$0.60 until December 20, 2020.

During 2018, the Company also received proceeds of \$2,193,277 (2017 - \$100,000) upon the exercise of 8,426,462 share purchase warrants.

During 2018, the Company experienced cash outflows of \$6,505,515 (2017 – \$2,038,088) from operating activities. Cash proceeds from Investing activities of \$329,742 were realized versus \$381,947 used in 2017. Financing activities realized inflows of \$11,105,638 (2017 – \$2,332,765) and included proceeds of \$9,805,260 from a non-brokered private placement and bought deal arrangement, and \$2,242,177 received upon option and warrant exercises.

Overall, cash increased by \$4,929,865 as compared to a decrease of \$87,270 during the prior year.

In March 2019, the Company received proceeds of \$2,304,000 from 5,760,000 warrants exercised at \$0.40 per share. Additional proceeds of \$937,433 from exercise of 3,129,442 warrants were also received during April 2018 that had an expiry of April 10, 2019.

## **RISKS AND UNCERTAINTIES**

The Company is a relatively new company with limited operating history and, in addition to facing all of the competitive risks in the underwater sonar and robotics sector it will face all the risks inherent in developing a business including: access to capital, ability to attract and retain qualified employees, ability to attract and maintain customers and the ability to put in place appropriate operating and control procedures routines.

Industry specific risks include, but are not limited to:

- *Competitive risk* – the sonar industry in which the Company operates is highly competitive. The competitors of the Company range from small single product companies to diversified corporations in the military, sonar and marine imaging industry. Some of the competitors of the Company may have more extensive or more specialized engineering, manufacturing, and marketing capabilities;
- *Technology risk* – The future success of the Company will depend on its ability to develop new technologies that achieve market acceptance. The sonar market is characterized by rapidly-changing technologies and evolving industry standards;

- *Protection of Intellectual Property:* The Company may be unable to adequately protect its intellectual property rights, which could affect its ability to compete. Protecting the Company's intellectual property rights is critical to its ability to compete and succeed as a company. The Company currently has trademark registrations and relies on a combination of copyright, trademark, and trade secret laws, confidentiality procedures, contractual provisions and other measures to protect its proprietary information. However, all of these measures afford only limited protection;
- *Outside suppliers:* The Company's operations depend on component availability and the manufacture and delivery by key suppliers of certain products and services. Further, the Company's operations are dependent on the timely delivery of materials by outside suppliers. The Company cannot be sure that materials, components, and subsystems will be available in the quantities required, if at all;
- *Government contracts:* The Company will depend, in part, on government contracts, which may only be partially funded, subject to termination, heavily regulated, and audited. The termination of one or more of these contracts could have a negative impact on the operations of the Company; and
- *Competitive bidding:* The Company will derive significant revenue from contracts awarded through a competitive bidding process, which can impose substantial costs upon it, and the Company could fail to maintain its current and projected revenue if it fails to compete effectively.

An investment in the Company's common shares is highly speculative and subject to a number of risks and uncertainties. Only those persons who can bear the risk of the entire loss of their investment should participate. An investor should carefully consider the risks described above and the other information filed with the Canadian securities regulators before investing in the Company's common shares. The risks described above are not the only ones faced. Additional risks that the Company currently believes are immaterial may become important factors that affect the Company's business. If any of these risks occur, or if others occur, the Company's business, operating results and financial condition could be seriously harmed and investors may lose all of their investment.

#### **RELATED PARTY TRANSACTIONS**

Compensation of key management personnel during 2018 totaled \$642,129 (2017 - \$584,509) comprised of: share-based payments of \$95,500 (2017 - \$112,500); salaries of \$533,500 (2017 - \$459,308); and, short-term benefits of \$13,129 (2017 - \$12,701).

#### **CAPITAL MANAGEMENT**

The Company's objectives when managing its capital are to maintain a financial position suitable for supporting its operations and growth strategies, to provide an adequate return to shareholders and to meet its current obligations.

The Company's capital structure consists of shareholders' equity. The Company makes adjustments to the capital structure depending on economic conditions, its financial position and performance. In order to maintain or adjust the capital structure, the Company may issue new shares, buyback shares or pay dividends, issue new debt and sell assets to reduce debt.

#### **FINANCIAL INSTRUMENTS AND RISK MANAGEMENT**

As at December 31, 2018, the Company's risk exposures and the impact of the Company's financial instruments are summarized below:

##### ***Credit Risk:***

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was:

	December 31, 2018	December 31, 2017
Cash and cash equivalents (bank indebtedness)	\$ 4,929,865	\$ (326,448)
Trade and other receivables	1,733,363	1,487,373
Note Receivable	-	154,183
Share subscriptions receivable	76,833	76,833
Derivative asset	-	9,491
	<b>\$ 6,740,061</b>	<b>\$ 1,401,432</b>

The Company manages credit risk by holding the majority of its cash with high quality financial institutions in Canada, where management believes the risk of loss to be low. As at December 31, 2018, the Company had in cash equivalents \$2,000,000 in Guaranteed Investment Certificates, bearing interest of 2.3% per annum, with a 30 day non-cashable period, and 12 month maturity.

**Liquidity Risk:**

Liquidity risk is the risk that the Company will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Company's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions. As at December 31, 2018, the Company had a cash and cash equivalents balance of \$4,929,865 (2017-\$Nil), to settle current liabilities of \$4,815,590 (December 31, 2017 - \$4,722,736).

**Market Risk:**

Market risk is the risk of loss that may arise from changes in market factors such as interest rates, foreign exchange rates, and commodity and equity prices.

(a) Interest rate risk

At December 31, 2018, the Company held a cash balance of \$4,929,865 and had drawn \$Nil against its line of credit (2017 - \$326,448). The Company is not currently exposed to any significant interest rate risk.

(b) Foreign currency risk

The Company's exposure to foreign currency risk is limited to sales in USD, GDP and EUR, certain purchases of inventory in USD, GBP and EUR, and its note receivable. The Company does not use any form of hedging against fluctuations in foreign exchange.

**Fair Value:**

During the year ended December 31, 2018, there were no transfers between level 1, level 2 and level 3 classified assets and liabilities. The fair values of the Company's financial instruments are considered to approximate the carrying amounts.

The following table provides the disclosures of the fair value and the level in the hierarchy:

December 31, 2018	Level 1	Level 2	Level 3
Financial assets classified as loans and receivables:			
Cash	\$ 4,929,865	\$ -	\$ -
Trade and other receivables	-	1,733,363	-
Investment tax credits recoverable	-	-	-
Investment	-	-	-
Share subscription receivables	-	76,833	-
Financial liabilities at amortized cost:			
Bank indebtedness	-	-	-
Trade and other payables	-	1,894,778	-
Long term note payable	-	386,159	-

<b>December 31, 2017</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
Financial assets classified as loans and receivables:			
Trade and other receivables	\$ -	\$ 1,487,373	\$ -
Investment tax credits recoverable	-	350,257	-
Note receivable	-	154,183	-
Derivative asset	-	-	9,491
Investment	-	-	30,530
Share subscription receivables	-	76,833	-
Financial liabilities at amortized cost:			
Bank indebtedness	-	326,448	-
Trade and other payables	-	3,905,022	-

### OFF-BALANCE SHEET ARRANGEMENTS

The Company has no off-balance sheet arrangements as of December 31, 2018 and as at the date of this MD&A.

### USE OF ESTIMATES AND JUDGMENTS

The preparation of financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results may differ from those estimates. Estimates are reviewed on an ongoing basis based on historical experience and other factors that are considered to be relevant under the circumstances. Revisions to estimates on the resulting effects of the carrying amounts of the Company's assets and liabilities are accounted for prospectively.

All of the Company's significant accounting policies and estimates and judgments are included in Notes 3 and 4 of its audited consolidated financial statements for the year ended December 31, 2018.

### SUBSEQUENT EVENTS

Subsequent to December 31, 2018, the Company:

- (a) received \$568,000 contract from Public Works and Procurement Canada under the Defence Innovation Research Program (DIRP). The object of Kraken's DIRP contract is to develop a low frequency, ultra-wideband SAS for use in underwater operational environments.;
- (b) received \$1.7 million of purchase orders from Ocean Infinity for Aquapix® SAS and support.
- (c) received proceeds of \$2.3 million from Ocean Infinity from the exercise of 5,760,000 warrants at \$0.40 per share;
- (d) issued 500,000 options to certain external consultants with three-year term and exercise price of \$0.70
- (e) announced that long standing customer, ECA Group, is part of winning consortium for Belgium and Dutch Navy mine hunting program. ECA Group's share of the contract is valued at approximately €450 million. Upon successful contract execution and if all contract options are exercised as quoted, Kraken's portion of the program is expected to be in excess of C\$35 Million.
- (f) awarded \$1 million financial contribution from the Government of Newfoundland and Labrador under the Innovation and Business Development Funding (IBDF) program. The funding will be used for the initial phase of the OceanVision™ project that Kraken plans to pursue as part of the Ocean Supercluster initiative.
- (g) received proceeds of \$937,433 from exercise of 3,129,442 warrants which had an expiry of April 10, 2019.
- (h) announced \$1 million contract for ThunderFish® from Government of Canada under Canada's BCIP program.
- (i) Received \$0.6 million contract for subsea battery solution for military customer.

## ADOPTION OF NEW ACCOUNTING PRONOUNCEMENTS

### *IFRS 15, Revenue from Contracts with Customers:*

The standard contains a single model that applies to contracts with customers and two approaches to recognizing revenue: at a point in time or over time. The model features a contract-based five-step analysis of transactions to determine whether, how much and when revenue is recognized. New estimated and judgmental thresholds have been introduced, which may affect the amount and/or timing of revenue recognized.

The Company has adopted IFRS 15 with a date of initial application of January 1, 2018 using the cumulative effect method of adoption, and accordingly the comparative figures in 2017 in the Company's consolidated financial statements have not been restated.

The Company's revenue is derived from product sales and services. Revenue is recognized upon transfer of control of promised products or services to the customers and at an amount that reflects the consideration the Company expects to receive in exchange for those products and services. Professional services are primarily related to contract research, training and integration.

Product revenue is generally recognized at a point in time upon delivery to the customer. A product or service is distinct if the customer can benefit from it on its own or together with other readily available resources, and the Company's promise to transfer the good or service is separately identifiable from other promises in the contractual arrangement with the customer. In certain contracts, there is significant integration work to enable the Company's product to work on the customer's vessel or underwater vehicle. This is the case on some legacy contracts that include both product and integration in one contract. In these contracts (and where the Company only can provide the integration work), revenue is recognized not upon shipment to the customer, but upon final integration with the customer's equipment.

Service revenue is recognized over time as the services are delivered to the customer. When contracted on a fixed fee basis, revenue is generally recognized progressively by reference to the stage of completion of the contract, measured by the cost incurred to date in relation to the total expected cost to complete the deliverable, commonly referred to as the percentage-of-completion method. For contracts billed on a time and materials basis, the Company invoices the customer and recognizes revenue equal to the amount of time incurred during the period. If the estimated cost to complete a contract increases over the life of the contract resulting in a loss on the contract, the loss is recognized immediately into the consolidated statement of loss and comprehensive loss.

When a contract includes more than one performance obligation, the total amount of consideration to be received is allocated to distinct products and services based on the stand-alone selling price ("SSP") for each of the products and services in the customer contract, which is typically determined based on the price at which the Company separately sells or would separately sell each product or service.

The Company has elected to apply the practical expedient to not adjust the total consideration over the contract term for the effect of a financing component if the period between the transfer of services to the customer and the customer's payment for these services is expected to be one year or less.

Significant judgments and estimates:

Application of the accounting principles related to measurement and recognition of revenue requires the Company to make judgements and estimates. The Company uses judgement to assess if its products and services are distinct, and should be accounted for as separate performance obligations, or together as a combined performance obligation. In arrangements with multiple performance obligations, estimates are required to allocate revenue to each performance obligation in the contract.

For service contracts, the Company exercises judgement in determining the appropriate measure of progress for recognizing revenue over time. Estimates of proportional performance are required to recognize revenue including effort spent to date versus the total expected effort to deliver the services. When a percentage of completion estimate is used, estimates related to cost to complete are routinely revised based on changes in the facts relating to each contract.

**Impact of Adoption of IFRS 15:**

The Company applied IFRS 15 using the cumulative effect method and has recognized the cumulative effect of initially applying IFRS 15 as an adjustment to the opening balance of equity at January 1, 2018. The comparative information has not been restated and continues to be reported under IAS 18 and IAS 11.

Previously, the Company recorded revenue from product sales using the percentage of completion basis. At the date of application of IFRS 15, the specific contracts in progress at the time did not meet the criteria in IFRS 15 to permit the recognition of revenue over time. As a result, amounts received in respect of such product sales have been reclassified from revenue to deferred revenue and amounts recorded in cost of sale have been reclassified to work on progress. The following table summarizes the impact of the transition to IFRS 15 on the Company's opening deficit at January 1, 2018:

	Balances as at December 31, 2017	IFRS 15 Adjustments	Balances as at January 1, 2018
<b>Assets</b>			
Trade and other receivables	\$ 1,487,373	\$ (885,833)	\$ 601,540
Inventory work in progress	1,530,508	1,197,785	2,728,293
<b>Liabilities</b>			
Deferred revenue	(491,266)	(1,888,546)	(2,379,812)
<b>Equity</b>			
Deficit	7,359,237	1,576,594	8,935,831

The following tables summarize the impact of adopting IFRS 15 on the Company's consolidated financial statements as at, and for the year ended December 31, 2018. There was no material impact on the Company's statement of cash flows for the year ended December 31, 2018, however, the statement of financial position at December 31, 2018 would have reflected a decrease in deferred revenues of approximately \$975,000 and a decrease in inventories of approximately \$592,000.

**Condensed Consolidated Statement of Loss and Comprehensive Loss**

Consolidated Statement of Loss and Comprehensive Loss	As reported	Adjustments	Balances without adoption of IFRS 15
Product revenue	\$ 6,707,956	(1,752,123)	\$ 4,955,833
Cost of sales	3,902,538	(558,470)	3,344,068
Net loss	\$ (2,852,389)	(1,193,653)	\$ (4,046,042)

**IFRS 9, Financial Instruments:**

IFRS 9, Financial Instruments, replaces IAS 39, Financial Instruments: Recognition and Measurement, and some of the requirements of IFRS 7, Financial Instruments: Disclosures. The objective of IFRS 9 is to establish principles for the financial reporting of financial assets and financial liabilities that will present relevant and useful information to users of financial statements for their assessment of the amounts, timing and uncertainty of an entity's future cash flows. The Company has adopted IFRS 9 on January 1, 2018 on a retroactive without restatement basis and accordingly the comparative figures in 2017 in the Company's consolidated financial statements have not been restated.

IFRS 9 largely retains the existing requirements in IAS 39 for the classification and measurement of financial liabilities. However, it eliminates the previous IAS 39 categories for financial assets of held-to-maturity, loans and receivables, and available for sale. The classification of financial assets under IFRS 9 is generally based on the

business model in which a financial asset is managed and its contractual cash flow characteristics. Derivatives embedded in contracts where the host is a financial asset in the scope of the standard are never separated. Instead, the hybrid financial instrument as a whole is assessed for classification.

Cash and cash equivalents, and receivables that were classified as loans and receivables under IAS 39 are classified as financial assets measured at amortized cost. There is no change to the initial measurement of these financial assets.

The investment in Kraken Power GmbH is classified as fair value through profit or loss. The note receivable and embedded conversion option that were previously accounted for separately under IAS 39 are classified together under IFRS 9 at fair value through profit or loss, whereas under IAS 39, the note receivable was measured at amortized cost and the derivative asset was carried at fair value through profit or loss.

IFRS 9 also replaces the 'incurred loss' model in IAS 39 with an expected credit loss ("ECL") model. ECL's are a probability-weighted estimate of credit losses. The Company calculated ECL's based on consideration of customer-specific factors and factual credit loss experience over the past five years. Excluding a bad debt expense from a single customer in 2016, the Company's actual credit loss has not been material. There was no impact to the financial statements on the adoption of IFRS 9.

#### **FUTURE ACCOUNTING STANDARDS AND INTERPRETATIONS**

Certain new accounting standards and interpretations have been published that are not mandatory for the current reporting period. These standards have been assessed to not have a significant impact on the Company's financial statements:

#### **FUTURE ACCOUNTING PRONOUNCEMENTS**

A number of new standards, and amendments to standards and interpretations under IFRS, are not yet effective and have not been applied in preparing these consolidated financial statements.

##### ***IFRIC 23, Uncertainty over Income Tax Treatments:***

The Interpretation provides guidance on the accounting for current and deferred tax liabilities and assets in circumstances in which there is uncertainty over income tax treatments. It requires an entity to contemplate whether uncertain tax treatments should be considered separately, or together as a group, based on which approach provides better predictions of the resolution. Probability will be determined whether the tax authorities will accept the uncertain tax treatment, and if it is not probable that the uncertain tax treatment will be accepted, they will measure the tax uncertainty based on the most likely amount or expected value, depending on whichever method better predicts the resolution of the uncertainty. The Company intends to adopt the Interpretation in its financial statements for the annual period beginning on January 1, 2019. The Company does not expect the Interpretation to have a material impact on the financial statements.

##### ***IFRS 16, Leases:***

In January 2016, the IASB issued IFRS 16 *Leases*. This standard introduces a single lessee accounting model and requires a lessee to recognize assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value. A lessee is required to recognize a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. This standard substantially carries forward the lessor accounting requirements of IAS 17, while requiring enhanced disclosures to be provided by lessors. Other areas of the lease accounting model have been impacted, including the definition of a lease. Transitional provisions have been provided. The new standard is effective for annual periods beginning on or after January 1, 2019. The extent of the impact of adoption of the standard has not yet been determined.

**OUTSTANDING SHARE DATA AS AT MAY 9, 2019:**

(a) Authorized and issued share capital:

<b>Class</b>	<b>Par Value</b>	<b>Authorized</b>	<b>Issued Number</b>
Common	No par value	Unlimited	145,952,595

(b) Summary of options outstanding:

<b>Security</b>	<b>Number</b>	<b>Number Exercisable</b>	<b>Exercise Price</b>	<b>Expiry Date</b>
Options	600,000	500,000	0.15	October 12, 2019
Options	300,000	300,000	0.15	December 1, 2019
Options	2,000,000	2,000,000	0.21	June 1, 2020
Options	350,000	233,333	0.17	September 20, 2020
Options	300,000	200,000	0.18	October 4, 2020
Options	1,740,834	1,120,000	0.18	December 18, 2020
Options	450,000	337,500	0.185	February 20, 2021
Options	200,000	66,667	0.21	June 21, 2021
Options	1,000,000	333,333	0.26	July 18, 2021
		5,090,834		
	6,940,834			

(c) Summary of warrants outstanding:

<b>Security</b>	<b>Number</b>	<b>Exercise Price</b>	<b>Expiry Date</b>
Warrants	550,000	0.60	December 20, 2020

**DISCLOSURE CONTROLS AND PROCEDURES AND INTERNAL CONTROLS OVER FINANCIAL REPORTING**

Disclosure controls and procedures (“DC&P”) are intended to provide reasonable assurance that material information is gathered and reported to senior management to permit timely decisions regarding public disclosure. Internal controls over financial reporting (“ICFR”) are intended to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with IFRS accounting principles.

TSX Venture-listed companies are not required to provide representations in their annual and interim filings relating to the establishment and maintenance of DC&P and ICFR, as defined in Multinational Instrument MI 52-109. In particular, the CEO and CFO certifying officers do not make any representations relating to the establishment and maintenance of (a) controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation, and (b) processes to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with the issuer’s GAAP.

**OTHER INFORMATION**

Additional information regarding the Company is available on SEDAR at [www.sedar.com](http://www.sedar.com) and on the Company’s website at [www.krakenrobotics.com](http://www.krakenrobotics.com).