



**KRAKEN SONAR INC.  
MANAGEMENT DISCUSSION AND ANALYSIS  
FOR THE THREE AND SIX MONTH PERIOD ENDED JUNE 30, 2017**

*This Management Discussion and Analysis (“MD&A”) of Kraken Sonar Inc. (the “Company” or “Kraken”) provides analysis of the Company’s financial results for the three and six month period ended June 30, 2017 and should be read in conjunction with the Company’s unaudited condensed consolidated interim financial statements and the notes thereto for the three and six month period ended June 30, 2017, which are available on SEDAR at [www.sedar.com](http://www.sedar.com). This MD&A is current as at August 29, 2017, the date of preparation.*

*The June 30, 2017 condensed consolidated interim financial statements have been prepared in accordance with International Financial Reporting Standards (“IFRS”) applicable to the preparation of interim financial statements. These financial statements were prepared using the same accounting policies and methods of computation, and are subject to the same use of estimates and judgments, as the Company’s consolidated financial statements for the year ended December 31, 2016. These condensed consolidated interim financial statements do not include all disclosures required by International Financial Reporting Standards (“IFRS”) for annual consolidated financial statements and accordingly should be read in conjunction with the Company’s audited consolidated financial statements for the year ended December 31, 2016 prepared in accordance with IFRS as issued by the International Accounting Standards Board (“IASB”). 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 Sonar Inc. (formerly Anergy Capital Inc.) was incorporated on May 14, 2008 under the *Business Corporations Act, British Columbia*) and has its registered office at Suite 700, 595 Burrard Street, PO Box 49290, Vancouver, BC V7X 1S8.

On February 18, 2015, Kraken Sonar Systems Inc. and Anergy Capital Inc. (“Anergy”), a company classified as a Capital Pool Company (“CPC”) as defined under Policy 2.4 of the TSX Venture Exchange (the “Exchange”), completed a reverse take-over transaction (“RTO” or “Transaction”) through the closing of a Share Exchange Agreement (the “SEA”) dated November 20, 2014, as amended January 29, 2015. After the RTO, Anergy changed its name to Kraken Sonar Inc. and the Company was continued under the *Canada Business Corporations Act* (“CBCA”).

For accounting purposes the transaction constitutes a reverse acquisition, as the shareholders of Kraken Sonar Systems Inc. acquired control of the consolidated entity. Kraken Sonar Systems Inc. is considered the acquiring and continuing entity, and Anergy was the acquired entity.

The Company’s principal business is the design, manufacture and sale of underwater sonar and acoustic sensor equipment.

At June 30, 2017, the Company had not yet achieved profitable operations, had experienced significant losses and negative cash flows from operations since inception, and had a working capital deficit of \$889,097 and a deficit of \$6,795,814. It may incur further losses in the development of its business. The continued operations of the Company are dependent on continued support from its directors, its ability to achieve and maintain profitable operations and positive cash flows from operations in the future and upon securing additional financing. There is a risk that additional financing will not be available on a timely basis or on terms acceptable to the Company. These material uncertainties may cast significant doubt on the Company’s ability to continue as a going concern.

## **Company Overview**

Kraken Sonar Inc. is a marine technology company engaged in the design, development and marketing of advanced sonar and acoustic velocity sensors for Unmanned Underwater Vehicles used in 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.

### ***KATFISH***

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 sonar technology called AquaPix® - Miniature Interferometric Synthetic Aperture Sonar (MINSAS), it is especially well-suited for both military and commercial seabed surveys.

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. In fact, industry analyst Market Info Group estimates that the global unmanned maritime systems market will reach \$2 billion by 2020.

In the commercial seabed survey market, KATFISH offers offshore oil and gas exploration and production companies the advantage of comprehensive, high-resolution surveys of existing infrastructure, such as pipelines and subsea stations, completed at least half the time as more conventional methods. KATFISH operates at speeds up to 8 knots, versus the slow moving 1-2 knots of Remotely Operated underwater Vehicles (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 countermeasures 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 March, the Company commenced sea trials and testing – which has been extended to take advantage of greatly improved weather conditions. The extended sea testing time has also enabled enhanced capabilities to the system's active stabilization control system, as well as fine-tuning of third party sensors. The Company expects that KATFISH™ will be shipped at the end of September. To date, Kraken has received milestone progress payments representing over 85% of the contract value.

### ***TECHNOLOGY LICENSING AGREEMENT FOR UNDERWATER ROBOTICS***

On March 15, 2017, the Company announced that in a strategic move to further strengthen its IP portfolio, it has signed an exclusive licensing agreement for underwater robotics technology with Germany's Fraunhofer Institute for Optronics, System Technologies and Image Exploitation (IOSB).

Kraken will license Fraunhofer software for use in its ThunderFish AUV, which is currently under development. The Company will pay Fraunhofer a royalty based on a percentage of each sale. Kraken will exclusively license the ThunderFish® Alpha 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 ThunderFish.

In late June, the Company took delivery of the 6000m rated ThunderFish® Alpha AUV which 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. Kraken has advanced \$378,200 (Euro 250,000) towards payment of the AUV's total cost of Euro 1,000,000. At June 30, 2017, an amount of \$1,110,975 (Euro

750,000) was included in accrued liabilities, representing the three remaining quarterly payments of Euro 250,000 each, in respect of the acquisition of the AUV.

In addition, Kraken will establish a long term technical co-operation program with Fraunhofer for hydrodynamic control systems, mission planning and autonomy algorithms that can be deployed in Kraken's upcoming ThunderFish® AUV program. Kraken has committed to granting research and development projects to Fraunhofer of a minimum Euro 300,000 per year for a period of five years.

### ***SEAVISION™ 3D LASER SYSTEM ANNOUNCED***

The Company's subsidiary, Kraken Robotik GmbH, introduced its new SeaVision™ system at the Ocean Business conference in early April 2017.

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 Autonomous Underwater Vehicles (AUVs). A hand-held diver system is planned for release later this year.

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

In early April 2017, Kraken Robotik GmbH was awarded a contract to design and build a 6,000m rated 3D laser/optical imaging system for the prestigious Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research (AWI) in Bremerhaven. The system was successfully delivered in mid-July and will generate revenue of over \$160,000 in the third quarter of the fiscal year.

SeaVision™ production units are expected to be available in late Q4 2017 and will be sold for \$100,000 per system.

### ***STRATEGIC INVESTMENT - KRAKEN POWER GMBH***

In May 2017, the Company announced that it has acquired a minority interest in ENITECH Subsea GmbH of Rostock, Germany and that the company has been renamed Kraken Power GmbH. Under the agreement, Kraken has taken a 19.9% equity interest and provided a €110,000 convertible loan. The loan pays interest at 5% per annum and has a term of three years. Through the conversion of the loan to equity and a further investment capped at €200,000, Kraken can choose to increase its ownership stake to 75% of the common shares of Kraken Power GmbH.

Kraken Power GmbH designs and manufactures unique pressure tolerant thrusters, drives, batteries, battery management systems, and electronics. These are specialized deep-sea components for Autonomous Underwater Vehicles (AUVs) and Remotely Operated Vehicles (ROVs). Kraken Power's technology and products enable a significant reduction in bill of material costs for our ThunderFish™ AUV. In addition, Kraken Power will continue to sell its products to the subsea industry.

This strategic investment is low risk, but provides a potentially significant return on investment (ROI) opportunity. Kraken's investment has precipitated additional funding in Germany by an arms-length third party involved in regional economic development activities that will provide Kraken Power with working capital for operations, hiring of additional personnel and funds for the purchase of inventory and capital assets.

Since being re-capitalized, Kraken Power has successfully restarted operations and is seeing strong international interest in its products. Kraken Power recently signed a C\$150,000 contract for T160 RIM thrusters with an Egyptian customer and also signed a spare parts supply agreement with a large defense contractor. In addition, Kraken Power expects to sign a multi-year deal to supply innovative rim thrusters to a commercial customer. This deal is forecasted to generate more than C\$2 million in annual revenues to Kraken Power. Finally, Kraken Power has quoted several companies addressing the offshore oil and gas market who have interest in contracting Kraken Power to supply battery systems, thrusters and drives for ROVs and AUVs.

### **AQUAPIX® MINSAS INTEGRATED ONBOARD RIPTIDE'S COMPACT UNMANNED UNDERWATER VEHICLES**

The Company has teamed with Boston-based Riptide Autonomous Solutions (Riptide) to supply AquaPix® MINSAS for integration onboard Riptide's new 2-Man Portable UUV platform.

Riptide has developed a highly flexible, open source family of autonomous undersea vehicles that provide users a state-of-the-art, low cost development solution ideally suited for developers of autonomy and behaviors, power systems, subsea sensors and new payloads.

AquaPix® MINSAS 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 with Riptide's 2-Man Portable UUV.

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, and allows operators to leverage Kraken's suite of post-processing tools, including the newly developed SASView 3D visualization and control software. The MINSAS plus RTSAS provides operators with an area coverage rate of 1km<sup>2</sup> per hour at full SAS resolution, enabling highly efficient survey operations.

On June 5, 2017, the Company announced that it was awarded a repeat AquaPix® sonar contract valued at over \$400,000 by a leading European defence contractor. The contract is on schedule and is expected to ship by the end of August, with revenue being recognized in the third quarter of fiscal 2017. The Company has received a contract deposit of 30% and will invoice for final proceeds upon shipment.

### **AVRO ARROW SEARCH**

In mid-July, the Company was awarded its first "Robotics as a Service" ("RaaS") contract by OEX Recovery Group Incorporated, to conduct a search for nine Avro Arrow free flight models launched over Lake Ontario in series of tests during 1954 - 1957. The models are one-eighth scale replicas of the famed flying jet, and were part of the final flight design tests done prior to the production of the CF-105 Arrow. The goal of the search is to discover the resting place of nine models, recover them and ultimately house them at the Canada Aviation and Space Museum in Ottawa and the National Air Force Museum of Canada in Trenton, Ontario. While contract terms between Kraken and OEX are confidential, the contract amount is less than \$500,000.

The search for the lost Avro Arrow test models officially commenced on July 28, 2017 using the Company's ThunderFish® underwater robot. Revenues of over \$250,000 are anticipated on this contract during the third quarter of fiscal 2017. The search has generated significant national and international media interest and will continue through the months of August and September in Lake Ontario.

### **KRAKEN EXPANDS ITS TEAM**

As the Company continues to execute its strategic vision, new members are being added to expand the corporate team.

Kraken Robotik GmbH began operations in early 2017 in Bremen, Germany with two employees. Recently three important team members were added, each bringing strong technical capabilities along with relationships across the commercial market and specifically oil and gas.

Dr. Jan Albiez – Director of Engineering. After being employed for six years as a researcher in robotics at FZI in Karlsruhe, Germany, Dr. Albiez received his PhD from the University of Karlsruhe in 2007 for his work on biologically inspired walking machines. He then worked at the underwater robotic branch of DFKI (German Research Center for Artificial Intelligence) in Bremen. DFKI is one of the world's largest non-profit research institutes for artificial intelligence. In 2014, he moved to SENAI CIMATEC in Salvador, Brazil where he served as technical leader on the BG/Shell FlatFish AUV project and trained a 20-person robotics team.

Dr. Sylvain Joyeux – Senior Software Scientist. Since receiving his PhD in 2007, Dr. Joyeux has been working on software frameworks to enable long-term autonomy in robotic systems. Until 2014 he was part of DFKI in Germany, where he managed autonomy-related projects and later led DFKI's Autonomy team. He is the main software architect of the Robot

Construction Kit, a software framework used in a variety of robotic systems at DFKI and elsewhere, that has a focus on robust, fault-tolerant autonomous systems. Since 2014, he has been leading the software engineering efforts of the BG/Shell FlatFish project.

Patrick Paranhos – Director, Business Development. Mr. Paranhos obtained his MSc in Robotics in 2009 from PUC University in Rio de Janeiro, Brazil where he developed probabilistic localisation algorithms for a Petrobras robotic system. In 2010, he started at DFKI and was involved in various robotics projects. In 2013, he moved to business development and helped establish a Brazilian Institute of Robotics and a Brazilian robotics company. Over the past 5 years he has originated over US\$30M in research projects in the oil & gas, electrical energy and mining sectors. He was also responsible for client relations and served as the main contact point with BG/Shell for the FlatFish subsea resident AUV project.

#### **FINANCIAL CONTRIBUTIONS AWARDED**

On March 21, 2017, Kraken announced that it will receive a non-refundable financial contribution of up to \$1,470,000 from the National Research Council of Canada Industrial Research Assistance Program (NRC-IRAP). NRC-IRAP's continued backing and assistance in the form of technical and business advisory services and funding is being used to support the development of Kraken's underwater robotics program, which involves development of a technology demonstration platform.

The first phase of the program will utilize the Fraunhofer Institute's DEDAVE Autonomous Underwater Vehicle (AUV) as the base platform. The AUV will be enhanced with hydrodynamic, control system and payload upgrades.

In mid-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™ Autonomous Underwater Vehicle (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.

To summarize, non-refundable financial contributions of up to \$2,215,950 were awarded by governmental agencies during the first half of fiscal 2017, which will be used to support the development of the Company's underwater robotics program. At June 30, 2017, the Company had applied for assistance totaling \$259,528, leaving \$1,956,422 remaining to be invoiced over the next 4-5 quarters.

#### **RESULTS OF OPERATIONS**

##### **Selected Annual Information**

	<b>Year Ended December 31, 2016 (\$)</b>	<b>Year Ended December 31, 2015 (\$)</b>	<b>Year Ended December 31, 2014 (\$)</b>
<b>Statement of Comprehensive Loss</b>			
Total Revenues	2,267,818	1,893,299	2,353,982
Cost of Sales	976,408	960,542	1,138,540
Loss from operating activities	(1,408,876)	(1,784,625)	(848,958)
Net loss and comprehensive loss	(1,420,175)	(1,992,410)	(1,310,240)
Basic and diluted loss per share	(0.02)	(0.03)	(0.03)
<b>Statement of Financial Position</b>			
Total Assets	2,188,578	2,042,676	2,943,303
Total Current Assets	1,771,898	1,857,733	2,813,957
Total Current Liabilities	1,416,353	1,074,373	3,050,759
Total Liabilities	1,416,353	1,074,373	3,050,759
Total Shareholders' Equity (Deficiency)	772,225	968,303	(107,456)

*\*Note: the 2014 comparative information provided above is that of Kraken Sonar Systems Inc.*

The Company incurred a loss of \$1,420,175 for the year ended December 31, 2016, as compared with a loss of \$1,992,410 for the year ended December 31, 2015. In 2015, the Company recorded aggregate costs of \$751,695 in relation to its Transaction, comprised of a listing expense of \$526,695 and transaction costs of \$225,000. Share-based compensation of \$143,500 (2015 - \$131,000) were recorded upon the grant of incentive stock options pursuant to the Company's incentive

stock option plan. During fiscal 2016, the Company continued to ramp-up its business activities. Administrative expenses were consistent with those of the prior year at \$1,262,464 (2015 - \$1,274,686); however, employee costs rose by approximately 65%, increasing to \$1,294,322 (2015 - \$785,001).

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 compensation (\$)	Net income (loss) (\$)	Comprehensive income (loss) \$	Basic and diluted income (loss) per share (\$)
Q2 2017	161,917	1,059,398	73,600	(1,115,902)	(1,175,008)	(0.01)
Q1 2017	246,498	1,488,245	39,000	(717,904)	(717,904)	(0.01)
Q4 2016	146,644	982,618	35,000	(846,552)	(846,552)	(0.01)
Q3 2016	944,941	699,436	5,900	19,234	19,234	0.00
Q2 2016	465,543	769,535	32,500	(475,261)	(475,261)	(0.01)
Q1 2016	710,690	725,830	70,100	(117,596)	(117,596)	(0.00)
Q4 2015	297,147	726,908	42,300	(426,777)	(426,777)	(0.01)
Q3 2015	493,558	787,643	7,100	(393,932)	(393,932)	(0.01)

*\*Note: Reclassification of certain accounts in Fiscal 2017 for financial statement presentation purposes has resulted in changes to the operating expenses reported in prior periods.*

Comparative balance sheet information for the first two quarters of 2017 and 2016 is presented below:

	Total Assets (\$)	Total Current Assets (\$)	Total Current Liabilities (\$)	Total Liabilities (\$)
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
Q2 2016	1,740,318	1,469,421	1,254,272	1,254,272
Q1 2016	2,072,517	1,873,698	1,151,710	1,151,710

### Three Months Ended June 30, 2017

The Company recorded revenues of \$161,917 (2016 - \$465,543) from product sales, marking a decrease of \$303,626 over the same period of the prior fiscal year. Revenue in the quarter related to sea trials of our MINSAS sensor product with AUVs from two customers as well as additional deliveries of our CVL product to our distribution partner, Trittech. We did not record any KATFISH revenue in the quarter and expect to record final KATFISH revenue from our first customer order upon final acceptance of the product by the customer, expected in Q4. The year ago quarter had higher revenues as it included KATFISH revenue as well as a MINSAS system delivery. The Company had deferred revenues of \$217,144 (2016 - \$60,228).

Cost of sales increased from that of the prior year at \$182,194 (2016 - \$167,245), or approximately 109% of the costs incurred in the same period of the prior fiscal year. The Company recorded gross margins of \$(20,277) (2016 - \$298,298). The decrease in gross margins is due to lower revenues as well as a \$57,859 write-off of inventory relating to a customer contract.

The Company recorded a net loss of \$1,115,902 and comprehensive loss of \$1,175,008 for the three months ended June 30, 2017, as compared to a net loss and comprehensive loss of \$475,261 for the same period of prior year. An amount of \$59,106 (2016 - \$Nil) is attributable to cumulative translation adjustment arising from foreign exchange differences on amounts recorded by the Company and its Germany subsidiary.

Administrative expenses rose by \$54,940 to \$424,432 (2016 - \$369,492). This amount included travel related costs of \$83,585 (2016 - \$96,717), rent of \$80,946 (2016 - \$41,918), and transfer agency services/public company fees of \$96,166 (2016 - \$44,052). During the quarter, the Company realized a foreign exchange loss of \$49,178 (2016 - \$4,024).

Research and development costs ("R&D") costs were lower than those of the prior year, totaling \$48,576 (2016 - \$115,034), as a result of the timing of expenditures on various R&D programs.

Employee costs for the three months ended June 30, 2017 totaled \$862,005 (2016 - \$542,477), reflecting a continued high degree of corporate growth. Growth quarter over quarter is anticipated as the Company ramps up new product development. As the KATFISH development winds down, resources will be allocated to the ThunderFish program.

Government assistance totaled \$253,041 (2016 - \$289,968) during the quarter. Additionally, the Company filed Scientific Research and Experimental Development (SR&ED) Expenditures Claims with the Canada Revenue Agency for the fiscal year ended December 31, 2015 and is entitled to a refundable Provincial Investment Tax Credit of approximately \$96,174 (2016 - \$Nil).

Share-based compensation of \$73,600 was recorded, representing the fair value of the options that vested during the three months ended June 30, 2017. During the same period of the prior fiscal year, the Company recorded stock-based compensation of \$32,500.

During the first quarter of fiscal 2017, the Company disposed of its investment in Square Robot Inc. a non-core asset, for consideration of US\$700,000, half of which was received on February 28, 2017, with the balance in the form of a note receivable due no later than June 27, 2017. The Company reduced the amount owing from \$458,835 (US\$350,000) to \$393,287 (US\$300,000) in exchange for early settlement of the note receivable. Upon receipt of the proceeds, an unrealized gain of \$313,622 recorded at March 31<sup>st</sup> was reversed and a gain of \$327,384 was recorded. There were no similar transactions completed during the same period of the prior fiscal year.

#### ***Six Months Ended June 30, 2017***

The Company recorded revenues of \$408,415 (2016 - \$1,176,233) from product sales, marking a decrease of \$767,818 over the same period of the prior fiscal year. The decrease in revenues is due to a lower number of MINSAS sensor sales in the first half of 2017 vs 2016 and the fact that no KATFISH revenues were recorded in Q2/2017. The Company had recorded deferred revenues of \$217,144 (2016 - \$60,228).

Cost of sales increased from that of the prior year at \$351,561 (2016 - \$241,576), or approximately 146% of the costs incurred in the same period of the prior fiscal year. The Company recorded gross margins of \$56,854 (2016 - \$934,657). The decrease in gross margins were a result of the items noted above, that is, lower revenues as well as a \$57,859 write-off of inventory relating to a customer contract.

The Company recorded a net loss of \$1,833,806 and comprehensive loss of \$1,892,912 for the six months ended June 30, 2017, as compared to a net loss and comprehensive loss of \$592,857 for the same period of prior year. The increased net loss is a combination of lower revenues and lower margins; combined with an increase in operating expenses undertaken to be position the company to handle an expected increase in orders.

Administrative expenses rose by \$179,442 to \$853,033 (2016 - \$673,591). This amount included travel related costs of \$132,644 (2016 - \$174,352), rent of \$146,146 (2016 - \$71,905), and transfer agency services/public company fees of \$135,030 (2016 - \$78,392). Accounting and legal costs incurred totaled \$70,717, as compared to \$54,458 during the first half of 2016. During the period, the Company realized a foreign exchange loss of \$47,680 (2016 - \$32,149).

Research and development costs ("R&D") costs totaled \$523,771 (2016 - \$225,162) – representing a 133% increase over the same period of the prior year. The Company had multiple R&D programs underway – KATFISH, SeaVision, and ALARS. As the KATFISH development winds down, additional resources will be allocated to the ThunderFish program.

Employee costs for the six months ended June 30, 2017 increased by approximately 58% as compared to the prior year, totaling \$1,692,128 (2016 - \$1,069,668). Of this amount, \$233,670 (2016 - \$Nil), or roughly 14%, is attributable to Kraken Robotik GmbH, the Company's wholly-owned subsidiary.

Government assistance totaled \$537,715 (2016 - \$575,667) during the period. During the period, the Company filed Scientific Research and Experimental Development (SR&ED) Expenditures Claims with the Canada Revenue Agency for the

fiscal year ended December 31, 2015 and is entitled to a refundable Provincial Investment Tax Credit of approximately \$96,174 (2016 - \$Nil).

Share-based compensation of \$112,600 was recorded, representing the fair value of the options that vested during the six months ended June 30, 2017. During the same period of the prior fiscal year, the Company recorded stock-based compensation of \$102,600.

During the first quarter of fiscal 2017, the Company disposed of its investment in Square Robot Inc. a non-core asset, for consideration of US\$650,000. A gain of \$707,562 was recorded upon the sale of the investment. There were no similar transactions completed during the same period of the prior fiscal year.

## **LIQUIDITY AND CAPITAL RESOURCES**

At June 30, 2017, the Company had negative working capital of \$889,097 (December 31, 2016 – positive working capital of \$355,546). Cash as at June 30, 2017 was \$15,799, as compared to \$85,650 held at December 31, 2016.

During the period, the Company disposed of its investment in the private robotics firm, a non-core asset, for consideration of \$864,882 (US\$650,000). A gain of \$707,562 was recorded upon the sale of the investment.

At June 30, 2017, proceeds of \$70,000 had been received upon the exercise of 466,666 share purchase warrants. In addition, the Company completed a non-brokered private placement of 11,806,660 units at a price of \$0.18 to raise gross proceeds of \$2,125,199. Each unit consists of one common share and one half of one common share purchase warrant. Each full warrant is exercisable at a price of \$0.30 for a period of two years. The Company paid share issue costs of \$85,882, inclusive of cash finder's fees paid on the private placement.

Non-refundable financial contributions of up to \$2,215,950 were awarded by governmental agencies during the first half of fiscal 2017, which will be used to support the development of the Company's underwater robotics program. At June 30, 2017, the Company had applied for assistance totaling \$259,528.

During the six months ended June 30, 2017, the Company experienced cash outflows of \$2,209,867 (2016 – \$781,284) from operating activities. Investing activities provided cash of \$92,077 (2016 – used cash of \$111,945), of which \$467,138 (2016 - \$59,781) was used for the purchase of property and equipment. An amount of \$864,882 was recorded in relation to the sale of the Company's investment in a private robotics firm, as compared to the investment of \$52,164 in the same period of the prior year. Other investing activities, related to Kraken Power GmbH, used cash of \$191,200. Bank indebtedness decreased by \$114,467 (2016 - \$Nil) during the period. Financing activities realized inflows of \$2,109,317, representing proceeds of \$70,000 (2016 - \$8,000) from warrant exercises and \$2,125,199 (2016 - \$Nil) from a private placement financing. Share issue costs totaled \$85,882. In the prior year, an increase of \$194,317 (2017 - \$Nil) pertaining to director loans was recorded. Overall, cash decreased by \$67,579, as compared to a decrease of \$690,912 during the first six months of the prior year.

The Company anticipates that revenues in excess of \$500,000 will be recorded during the third quarter of fiscal 2017 in relation to existing work in process.

In management's opinion, the Company has sufficient working capital at this time to meet its current financial obligations and administration costs required to operate the Company. The Company's continuance as a going concern in the future will depend upon its ability to achieve and maintain profitable operations and positive cash flows from operations in the future and obtain adequate financing if necessary.

## **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 acoustic sensor 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**

As at June 30, 2017 an amount of \$60,608 (2016 - \$60,608) was receivable from key management personnel for share subscriptions.

#### **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 (deficiency) and bank indebtedness. 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 June 30, 2017, 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:

	June 30, 2017	December 31, 2016
Cash	\$ 15,799	\$ 85,650
Trade and other receivables	710,243	550,696
Investment tax credits receivable	96,174	-
Note receivable	151,554	-
Derivative asset	11,389	-
Share subscriptions receivable	76,833	76,833
	\$ 1,061,992	\$ 713,179

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.

The share subscriptions receivable are related to the exercise price of stock options exercised by employees during the year ended December 31, 2014.

**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 of June 30, 2017, the Company had a cash balance of \$15,799 (December 31, 2016 - \$85,650) to settle current liabilities of \$2,559,887 (December 31, 2016 - \$1,416,352).

**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 June 30, 2017, the Company held a cash balance of \$15,799 and has drawn \$35,533 against its line of credit. The Company is exposed to interest rate risk on its line of credit balance.

(b) Foreign currency risk

The Company's exposure to foreign currency risk is limited to sales in USD and GBP, 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 six months ended June 30, 2017, 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:

June 30, 2017	Level 1	Level 2	Level 3
Financial assets classified as loans and receivables:			
Cash	\$ 15,799	\$ -	\$ -
Trade and other receivables	-	710,243	-
Investment tax credits recoverable	-	96,174	-
Note receivable	-	151,554	-
Derivative asset	-	-	11,389
Investment	-	-	30,530
Share subscription receivables	-	76,833	-
Financial liabilities at amortized cost:			
Bank indebtedness	-	35,533	-
Trade and other payables	-	2,307,210	-
Deferred revenue	-	217,144	-

## **OFF-BALANCE SHEET ARRANGEMENTS**

As of June 30, 2017 and the date of this MD&A, pursuant to a licensing agreement Kraken has committed to grant research and development projects to Fraunhofer of a minimum Euro 300,000 per year for a period of five years commencing in 2017.

## **USE OF ESTIMATES**

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.

Changes to the Company's significant accounting policies and estimates are included in Note 4 of its unaudited condensed consolidated interim financial statements for the three and six months ended June 30, 2017. The condensed consolidated interim financial statements do not include all disclosures required by International Financial Reporting Standards ("IFRS") for annual consolidated financial statements and accordingly should be read in conjunction with the Company's audited consolidated financial statements for the year ended December 31, 2016 prepared in accordance with IFRS as issued by the IASB.

## **SUBSEQUENT EVENTS**

Subsequent to June 30, 2017, the Company;

- (a) was awarded its first "Robotics as a Service" contract by OEX Recovery Group Incorporated, to conduct a search for nine Avro Arrow free flight models launched over Lake Ontario in series of tests during 1954 - 1957. The models are one-eighth scale replicas of the famed flying jet, and were part of the final flight design tests done prior to the production of the CF-105 Arrow. The goal of the search is to discover the resting place of nine models, recover them and ultimately house them at the Canada Aviation and Space Museum in Ottawa and the National Air Force Museum of Canada in Trenton, Ontario. While contract terms between Kraken and OEX are confidential, the contract amount is less than C\$500,000;
- (b) was awarded a contract valued at over \$425,000 by ATLAS ELEKTRONIK Canada. Kraken will supply and integrate its AquaPix® Miniature Interferometric Synthetic Aperture Sonar and Real-Time SAS Signal Processor on the Atlas SeaCat Autonomous Underwater Vehicle (AUV). Delivery is expected in September 2017; and,
- (c) had a total of 7,647,108 common shares released from escrow.

## **FUTURE ACCOUNTING PRONOUNCEMENTS**

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

### ***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 intends to adopt IFRS 15 in its consolidated financial statements for the annual period beginning on January 1, 2018. The extent of the impact of adoption of the standard has not yet been determined.

### ***IFRS 9, Financial Instruments:***

IFRS 9, Financial Instruments, will replace 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 IASB has

determined the revised effective date for IFRS 9 will be for annual periods beginning on or after January 1, 2018. The Company will evaluate the impact of the change to the consolidated financial statements based on the characteristics of financial instruments outstanding at the time of adoption.

**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 Company is currently evaluating the impact of this standard on the consolidated financial statements.

**Amendments to IFRS 2, Share-based Payments:**

In June 2016, the IASB issued amendment to IFRS 2, Shares-based Payments, clarifying how to account for certain types of share-based payment transactions. The amendments provide requirements on the accounting for a) the effects of vesting and non-vesting conditions on the measurement of cash-settled share-based payments; b) share-based payment transactions with a net settlement feature for withholding tax obligations; and c) a modification to the terms and conditions of a share-based payment that changes the classification of the transaction from cash-settled to equity-settled. The amendments apply for annual periods beginning on or after January 1, 2018. As a practical simplification, the amendments can be applied prospectively. The Company intends to adopt the amendments to IFRS 2 in its financial statements for the annual period beginning on January 1, 2018. The extent of the impact of adoption of the standard has not yet been determined.

**OUTSTANDING SHARE DATA AS AT AUGUST 29, 2017:**

(a) Authorized and issued share capital:

Class	Par Value	Authorized	Issued Number
Common	No par value	Unlimited	90,792,740

(b) Summary of options outstanding:

Security	Number	Number Exercisable	Exercise Price	Expiry Date
Options	1,310,000	1,310,000	0.25	March 17, 2018
Options	250,000	250,000	0.20	May 13, 2018
Options	100,000	100,000	0.21	July 1, 2018
Options	600,000	200,000	0.15	October 12, 2019
Options	300,000	100,000	0.15	December 1, 2019
Options	2,000,000	1,250,000	0.21	June 1, 2020
Options	250,000	83,333	0.17	March 8, 2020
	4,810,000	3,293,333		

(c) Summary of warrants outstanding:

Security	Number	Exercise Price	Expiry Date
Warrants	13,596,660	0.15	February 18, 2018
Warrants	3,579,767	0.30	August 12, 2018
Warrants	116,666	0.30	August 22, 2018
Warrants	5,903,330	0.30	April 11, 2019
	23,196,423		

(d) Summary of escrowed shares: At the date of this report, there are a total of 7,647,108 common shares subject to escrow restrictions. The escrow shares will be released on February 18, 2018.

#### **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.krakensonar.com](http://www.krakensonar.com).