

EXACTEARTH LTD. (the "Company")  
**MANAGEMENT'S DISCUSSION AND ANALYSIS**

*The following management discussion and analysis ("MD&A") is prepared as of June 12, 2019 and provides information that management believes is relevant to an assessment and understanding of the Company's operations and financial condition for the three and six months ended April 30, 2019. This MD&A should be read in conjunction with the Company's unaudited interim condensed consolidated financial statements, including the condensed notes thereto, (the "Unaudited Interim Condensed Consolidated Financial Statements"), and our audited consolidated financial statements, including the notes thereto, for the year ended October 31, 2018 (the "Consolidated Financial Statements"). The Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards ("IFRS"). All amounts herein, except per share data, are stated in thousands of Canadian dollars ("CAD") unless otherwise indicated. Unless otherwise noted, the information contained herein is dated as of April 30, 2019.*

**Additional Information and Risk Factors**

Additional information relating to the Company, including risk factors that may adversely affect or prevent the Company from carrying out all or portions of its business strategy are discussed in the Company's Annual Information Form ("AIF") dated January 25, 2019 and other filings available on SEDAR at [www.sedar.com](http://www.sedar.com).

**Caution Regarding Forward-Looking Statements**

This MD&A contains forward-looking statements that relate to the Company's current expectations and views of future events. In some cases, these forward-looking statements can be identified by words or phrases such as "may", "will", "expect", "anticipate", "aim", "forecast", "estimate", "intend", "plan", "seek", "believe", "potential", "continue", "is/are likely to" or the negative of these terms, or other similar expressions intended to identify forward-looking statements. The Company has based these forward-looking statements on its current expectations and projections about future events and financial trends that the Company believes may affect its financial condition, results of operations, business strategy and financial needs. These forward-looking statements include, among other things, statements relating to: expectations regarding the Company's revenue, expenses, operations and cash flow; anticipated impact of changes to accounting policies; anticipated industry trends; anticipated new Order Bookings (as defined below); research and development spending levels; selling, general and administrative spending; revenue growth guidance; gross margin trending; anticipated and continued benefits of the Second-Generation Constellation on-board Iridium NEXT; expected useful lives of satellite assets and anticipated completion of additional ground stations; the Company's intention to respond to certain procurement proposal requests and the outcome thereof.

Forward-looking statements are based on certain assumptions and analysis made by the Company in light of its experience and perception of historical trends, current conditions and expected future developments and other factors the Company believes are appropriate and are subject to risks and uncertainties. Although the Company believes that the assumptions underlying these statements are reasonable, they may prove to be incorrect. Whether actual results, performance or achievements will conform to the Company's expectations and predictions is subject to a number of known and unknown risks, uncertainties, assumptions and other factors, which are discussed in greater detail in the Company's AIF.

**Non-IFRS Measures**

In this MD&A, the Company provides information about Order Bookings; Adjusted Earnings Before Interest, Taxes, Depreciation and Amortization ("**Adjusted EBITDA**") and Subscription Revenue (as defined below). Order Bookings, Adjusted EBITDA, and Subscription Revenue are not defined by IFRS and the Company's measurement of them may vary from that used by others. These non-IFRS measures are not recognized measures under IFRS and do not have a standardized meaning prescribed by IFRS and are therefore unlikely to be comparable to similar measures presented by other companies. Rather, these measures are provided as additional information to complement the IFRS measures by providing further understanding of the Company's results of operations from management's perspective. Accordingly, they should not be considered in isolation or as a substitute for analysis of the Company's financial information reported under IFRS.

The Company defines “Order Bookings” as the dollar sum of fully executed contracts for the supply of products and/or services to its customers received during a defined period of time. Order Bookings are indicative of firm future revenue streams; however, they do not provide a guarantee of future net income and provide no information about the timing of future revenue.

The Company measures Adjusted EBITDA as net income plus interest, taxes, depreciation and amortization, unrealized foreign exchange losses, share-based compensation costs, and impairment losses, less unrealized foreign exchange gains, other income and restructuring expense recovery. The Company believes that Adjusted EBITDA provides useful supplemental information as an indication of the income generated by its main business activities before taking into consideration how they are financed or taxed and excluding the impact of items that are considered by management to be outside of the Company’s ongoing operating results. Adjusted EBITDA should not be construed as an alternative to net income (loss) determined in accordance with IFRS as an indicator of the Company’s performance or to cash flows from operating, investing and financing activities as a measure of liquidity and cash flows.

The Company defines “Subscription Revenue” as the dollar sum of fully executed contracts for its products and/or services to its customers that are subscription-based, typically sold with a one-year period of service and recognized in the Company’s “Subscription Services” segmented revenue.

## **Overview**

The Company is a leading provider of global maritime vessel data for ship tracking and maritime situational awareness solutions. Since its establishment in 2009, the Company has pioneered Satellite Automatic Identification System (“**S-AIS**”) maritime surveillance and has delivered to its clients a view of maritime behaviours across all regions of the world’s oceans that is unrestricted by terrestrial limitations. The Company has deployed an operational data processing supply chain with its First-Generation Constellation, receiving ground stations, patented decoding algorithms, and advanced Big Data processing and distribution facilities. This ground-breaking system provides a comprehensive picture of the location of Automatic Identification System (“**AIS**”) equipped maritime vessels throughout the world and allows the Company to deliver data and information services characterized by high performance, reliability, security, and simplicity to large international markets.

The Unaudited Interim Condensed Consolidated Financial Statements include the accounts of the Company’s Subsidiary, exactEarth Europe Ltd. (“**Subsidiary**”) with inter-company transactions and balances eliminated. The Company has two locations, one in Cambridge, Ontario, Canada and the other in Harwell, United Kingdom.

## Key Components and Functions of the Company’s Product Offering

### *AIS*

Since 2004, all major ships in the world have been required by the International Maritime Organization to carry an AIS transponder which constantly transmits VHF radio signals containing information about the ship (name, destination, cargo) as well as its movement (position, course, heading speed, etc.). Today the Company is capturing AIS data on more than 500,000 vessels. This capability is further enhanced by the Company’s patented capability to track small vessels in the open ocean utilizing a new class of specially modified Class B AIS transponders. The Company anticipates that with this added capability, its addressable market will increase to more than one million vessels by 2020.

AIS was originally designed as a collision avoidance system; however, it has been widely recognised for some time that such open broadcast information can be collected and used to track and monitor shipping activity close to shore from terrestrial AIS stations. Terrestrial systems are physically limited by the curvature of the earth and are only effective for approximately 50 nautical miles, or approximately 90 kilometres. The Company has led the way in overcoming this limitation by pioneering the reception of such AIS signals from low earth orbit (“**LEO**”) satellites, thus eliminating the distance restriction imposed by the terrestrial AIS stations, and for the first time in maritime history, providing a real-time unrestricted global view of all shipping regardless of location, or proximity to a coastline.

### *Satellites*

The Company receives AIS data from its constellation of LEO satellites. The first satellite, EV-0 was launched by exactEarth’s previous parent company, COM DEV International Ltd., in 2008 for the purpose of validating the concept

of collecting maritime AIS signals from space but is now non-operational. Between 2011 and 2013, the Company launched and commissioned four more advanced AIS satellites, designated as EV-1, EV-2, EV-5 and EV-6. These satellites incorporated advanced AIS payloads designed to further improve AIS message detection from space. The Company's satellite constellation grew once again in December 2014 with the successful integration of three advanced in-orbit AIS satellites into the exactView constellation through a contract under which the Company purchased one satellite, EV-11, and licensed data month to month from two more. The Company's equatorial satellite, EV-9, was launched and commissioned in 2015. The data from these additional AIS satellites significantly increased the capacity of the Company's global vessel monitoring service and further enhanced its world-leading AIS message detection performance from space. As part of the Company's restructuring effort that commenced in October 2016, the Company cancelled its commitment on the two leased satellites in the first quarter of 2017.

On February 3, 2017, the Company lost contact with EV-5. When subsequent recovery efforts were not successful, the Company filed an insurance claim which was paid in full in April 2017.

EV-8 was launched on the PAZ satellite on February 22, 2018, and commissioning was completed on December 6, 2018. EV-8 is operated by Hisdesat Servicios Estratégicos, S.A. ("**Hisdesat**"), one of the Company's significant shareholders. EV-7 was launched on June 22, 2016 and commissioning was completed on May 14, 2019.

All fifty-eight of the payloads in our Second-Generation Constellation of satellites using exactView™ RT ("**exactView RT**") Powered by Harris Corporation ("**Harris**") have been launched into orbit. This brings the total number of satellites in service as of June 12, 2019 to sixty-five (seven First-Generation plus fifty-eight Second-Generation).

The Company's collaboration with Harris is further described in the "Strategic Alliances" section below.

#### *Ground infrastructure and data processing*

The Company has deployed a network of international ground stations for its First-Generation satellite AIS constellation. These ground stations provide highly reliable reception of satellite data downlinks, local data storage and transmission to the Company's primary data processing centre ("**DPC**"). Ground stations are often equipped with redundant capabilities to ensure the highest level of reliability.

For the Second-Generation exactView RT constellation, the Company receives the satellite AIS data from the Iridium NEXT network via a dedicated data feed from Harris Satellite Operations Control ("**HSOC**"). The exactView RT feed from HSOC is received at the Company's primary DPC.

Satellite AIS data from the ground infrastructure is forwarded through secure Virtual Private Networks on high capacity links to the primary DPC, with a secondary DPC used for back-up and peak offloading. Both DPCs which are located in Ontario, Canada, process, store and transmit AIS data products to the Company's customers.

#### *Products and services*

Through a variety of products and services, the Company provides what they believe to be the most advanced location-based information on maritime traffic commercially available today. The Company provides the flexibility needed to customize its products and services to suit the needs of customers on a timely basis.

Subscription Services encompasses the sale of Data-as-a-Service ("**DaaS**"), Software-as-a-Service ("**SaaS**") and Information-as-a-Service ("**IaaS**"). DaaS includes the provision of continuous data feeds in various formats and delivery systems through secure data connections over the Internet. The Company provides a SaaS solution that allows users to access the ship information derived from the Company's AIS data sources within an easy-to-use mapping environment. The Company's value-add Information Services product offerings encompass its IaaS solutions.

Data products include raw data and customized reports derived from the Company's extensive and growing archive which dates back to July 5, 2010. Revenue from the sale of these products is generally recognized when they are delivered to the customer and is not necessarily recurring in nature.

Other products and services include special projects with governments and space agencies to research methods and applications related to the satellite AIS business, Class B transponders (described in the "AIS" section above), as well as specific analysis and reporting contracts. These projects are sporadically announced by governments and there are no guarantees that they will be awarded to the Company. Revenue from these projects may span several

months with no certainty that there will be similar projects in the future from which the Company will be able to earn revenue.

### Customers

The Company's S-AIS data service customers include both government departments (defense; intelligence and security; search and rescue; border patrol and maritime safety; government and space agencies; as well as other ministries and organizations) and commercial and other customers (commercial fishing; business intelligence and risk management; port management; commercial offshore (oil and gas); commercial shipping; hydrographic and charting; as well as other academic and research institutions). The Company's S-AIS data service provides enhanced maritime domain awareness for improved vessel management, scheduling, environmental protection, search and rescue operations, and defence and border securing applications.

### Strategic alliances and relationships

In June of 2015 the Company announced an agreement with Harris (the "**Harris Agreement**") which allows the Company to apply its expertise and technology in AIS signal detection from space on-board Iridium NEXT, Iridium's second-generation satellite constellation. The payloads utilize Harris' powerful AppStar applications platform and employs an in-orbit version of the Company's patented AIS detection algorithms, creating an AIS detection capability for global maritime tracking. The Company's Second-Generation Constellation, called exactView RT, collects information across the entire maritime frequency band and provides real-time access to and from the ground enabling real-time delivery of the collected maritime information on a global scale.

exactView RT provides real-time global coverage with enhanced detection performance as compared to other S-AIS systems. The robustness of the constellation, programmability of the payloads and support for multiple in-orbit applications will make this the global maritime information collection system designed to meet and exceed the needs and expectations of the world's maritime community for the foreseeable future.

As part of the Harris Agreement, the two companies share their respective AIS product revenue with each other. On February 14, 2019, Harris asserted that the initial operating capacity ("**IOC**") has been achieved as a result of the deployment of 58 satellites. At the point that IOC is achieved, the Harris Agreement stipulates that the Company will share 40% of annual data revenue recognized after IOC on the first USD\$40,000 of annual revenue, and 33% of additional revenues with Harris, and that Harris will share 18% of Class A and 50% of non-Class A revenue with the Company. The Harris Agreement also stipulates that the Company will pay Harris USD\$50 per year for each satellite put in service as part of the Second-Generation Constellation (up-to USD\$750 per quarter). Through management discussions, the Company has given notice to Harris that there are several capabilities and service level improvements that need to be rectified. Please refer to the Company's AIF for details pertaining to the Harris Agreement. For additional information, refer to note 11 (Commitments and contingencies) in the Notes to the Unaudited Interim Condensed Consolidated Financial Statements.

In November of 2015, the Company announced an \$2,000 Australian dollar ("**AUD**") (CAD\$1,894) minority ownership investment in technology company, Myriota Pty Ltd. ("**Myriota**") of Adelaide, Australia. As part of the Myriota investment, the Company has obtained an exclusive licence to utilise their technology for vessel tracking in the maritime market. The Myriota technology uses advanced signal processing Intellectual Property ("**IP**") developed at the University of South Australia (UniSA) in order to develop advanced terminals, infrastructure, and applications for the fast-growing Satellite Internet of Things (SIoT) global market. This core IP has been developed to create a disruptively low-cost solution for the SIoT market which will have the capability of supporting many millions of global users. Myriota is particularly focused on the location tracking and sensor data applications markets. The Company's investment of AUD\$2,000 has been recorded as a technology licence and classified as an intangible asset. The Company will pay a 3.5% royalty on revenue derived from the technology under licence. It is expected that this intangible will be in use in late calendar 2019 and royalties will begin at that time. Myriota completed an AUD\$20,000 equity raise in the three months ended April 30, 2018. The equity raise, completed at a significantly higher valuation for Myriota, resulted in the dilution of the Company's ownership interest to 18% from 30%. For additional information, refer to note 5 (Investment) and note 7 (Intangible assets) in the Notes to the Unaudited Interim Condensed Consolidated Financial Statements.

In April of 2016, the Company announced a twenty-four-month strategic alliance with Larus Technologies Corporation ("**Larus**"), an Ottawa-based provider of adaptive learning and predictive analytics software. Under the strategic alliance, the two companies have been working together to develop and market Big Data analytics-based software applications and information services for the global surveillance and intelligence markets. New application areas include shipping movement and behavioural analysis and the companies will work together to advance the capabilities in the exciting area of predictive analytics. The Company will pay a royalty of 30% on the gross sales of products that are derived from the Larus Total::Insight™ technology. For additional information, refer to note 7 (Intangible assets), note 9 (Loans payable, financial instruments and foreign exchange) and note 11 (Commitments and contingencies) in the Notes to the Unaudited Interim Condensed Consolidated Financial Statements.

In June of 2018, the Company entered into an alliance agreement with IHSMarkit. IHSMarkit is a large global information and data services corporation with more than 50,000 data customers worldwide and a significant presence in the global maritime information and financial services markets. Under the alliance agreement the Parties have created an AIS Platinum global real time vessel tracking and vessel information product that combines the Company's real time global S-AIS data feed and IHSMarkit's terrestrial AIS data feed and vessel information. AIS Platinum is a premium offering into the market place, which can be marketed and sold by both parties. IHSMarkit has a significant market presence and the Company is anticipating that the relationship with IHSMarkit will contribute to orders growth commencing in future quarters.

In April of 2019, the Company entered into a three-year channel partner agreement with Exmile Solutions Ltd. ("**MarineTraffic**"). MarineTraffic owns the world's preeminent ship-tracking website, which attracts approximately six million unique visitors per month. MarineTraffic also operates 2,000 AIS stations in more than 165 countries around-the-world, delivering the most comprehensive AIS coastal tracking facility available today. Under terms of the channel partner agreement, MarineTraffic will deploy the Company's exactView RT data into its online maritime services products to help bring real-time, business-critical and actionable vessel information to maritime industry participants. [NTD: this assumes that a PR is issued]

#### Funding sources

On May 5, 2016, Innovation, Science and Economic Development Canada announced a \$54,000 Technology Demonstration Program contribution to MDA Systems Ltd., which changed its name to Maxar Technologies in 2017 ("**Maxar**"), and its partners. The funding is designed to support large scale technology demonstration projects related to the Canadian aerospace, defence, space, and security industries. On May 9, 2016, the Company entered into a Technology Demonstration Program Collaboration Agreement ("**TDP Agreement**") with Maxar as a Partner Recipient under the Technology Demonstration Program related to Space Technology and Advanced Research ("**STAR**"). The TDP Agreement provides funding at 50% of eligible costs in respect of STAR projects to a maximum total funding value of \$1,250. This funding is available to partially offset eligible STAR project costs during the period commencing August 12, 2014 and ending March 31, 2022. The Company submitted its final claim in the third quarter of 2018 and has recognized a cumulative total recovery to date of \$1,250. The funding recognized as an offset to cost of revenue in the three and six months ended April 30, 2019 was nil (April 30, 2018 – \$81 and \$176).

On October 18, 2018 the Company signed a loan agreement with the Strategic Innovation Fund ("**SIF**"). Under this agreement, the Company is eligible to receive funding for certain expenditures incurred from February 13, 2018 to February 12, 2021 to a maximum of \$7,206. The loan is repayable in 15 annual payments beginning February 28, 2024. The repayment values are dependent upon a calculated Performance Factor, which is used to calculate a Repayment Rate. The Repayment Rate is applied to annual Gross Business Revenue and for the payment in February of the subsequent year. The Company received payment for the first claim of \$1,425 in the fourth quarter of 2018. The Company has a receivable of \$1,452 for claimed and unclaimed funding related to expenses incurred prior to April 30, 2019 in the Unaudited Interim Condensed Consolidated Statements of Financial Position. The SIF loan is measured at fair value using an interest rate of 14% based on the market interest rate for a comparable instrument with a similar term, resulting in a loan balance of \$668 at April 30, 2019. The difference between the fair value at inception and the loan proceeds received is recorded as a government grant, which is recognized as an operating grant or a capital grant based on the relative proportion of eligible expenditures incurred. The Company recognized an operating grant of \$186 and \$878 and a capital grant of \$136 during the three and six months ended April 30, 2019. For additional information, refer to note 4 (Government assistance) and note 9 (Financial instruments) in the Notes to the Unaudited Interim Condensed Consolidated Financial Statements.

On December 13, 2018, the Company completed an offering of 13,000 convertible debentures at a price of \$1 per convertible debenture for gross proceeds of \$13,000. The net proceeds of \$11,854 from the convertible debenture financing will be used to fund the Company's ongoing working capital needs in support of business operations and for general corporate purposes. The convertible debenture financing represented the culmination of an extensive review of strategic alternatives by the Special Committee which will provide the Company with a solid financial footing going forward. Each convertible debenture is convertible into 2,000 common shares of the Company, being an effective conversion price of 50 cents per share at the option of the holder (subject to customary adjustments from time to time), at any time prior to the fifth anniversary of the closing date. For additional information, refer to note 9 (Financial instruments) in the Notes to the Unaudited Interim Condensed Consolidated Financial Statements.

### Staffing

The Company relies on the knowledge and talent of its employees and makes use of their expertise in satellite operations, Big Data architecture, web services, software and product development, and consulting services. With the deployment of the Company's First-Generation Constellation nearing completion, the Company is now able to reduce its satellite infrastructure operating costs as the Company continues to transition to an information and intelligence company.

The number of full-time employees at April 30, 2019 was 35 (April 30, 2018 – 41).

### Overall Performance

Revenue was \$3,906 and \$7,428 for the three and six months ended April 30, 2019, compared to \$3,179 and \$6,015 for the three and six months ended April 30, 2018. The Company's major application market segments are government and commercial. Government customers contributed \$1,051 and \$2,118 to the revenue for the three and six months ended April 30, 2019, compared to \$1,291 and \$2,335 for the three and six months ended April 30, 2018. Commercial revenue for the three and six months ended April 30, 2019 was \$2,855 and \$5,310, compared to \$1,888 and \$3,680 for the three and six months ended April 30, 2018.

Revenue related to Subscription Service orders will typically be realized over a twelve-month period, while revenue related to product orders is realized upon delivery. The backlog of Order Bookings won but not yet recognized in revenue at April 30, 2019 is \$24,604, compared to \$25,909 of Order Bookings backlog reported at April 30, 2018. Existing Order Bookings adjustments in the three and six months ended April 30, 2019 related to the renegotiation of a long-term contract. Revenue of \$6,891 from the current Order Bookings backlog is forecasted to be earned in the remainder of 2019 while \$8,665 is expected to be earned in 2020. The balance of \$9,048 is expected to be earned between 2021 and 2027.

The Company's foreign currency denominated Order Bookings backlog is affected by fluctuation in foreign exchange rates. The Company's closing Order Bookings backlog for any given quarter gets revalued as the CAD strengthens or weakens in relation to the Great Britain Pound ("**GBP**"), Euro ("**EUR**") or US dollar ("**USD**"), as applicable. The foreign exchange rates at April 30, 2019 were: GBP \$1.7493, EUR \$1.5055, USD \$1.3423, while the foreign exchange rates at April 30, 2018 were: GBP \$1.7656, EUR \$1.5509, USD \$1.2836. The fluctuation in exchange rates in the three and six months ended April 30, 2019 resulted in a decrease of \$1,060 and 1,338 in backlog (April 30, 2018 – increase of \$1,067 and decrease of \$86).

The following chart summarizes Order Bookings:

	Three months ended April 30		Six months ended April 30	
	2019	2018	2019	2018
Opening Order Bookings backlog	\$ 30,710	\$ 25,456	\$ 31,482	\$ 25,996
New Order Bookings	6,014	2,565	9,042	6,014
Existing Order Bookings adjustments	(7,154)	-	(7,154)	-
Foreign exchange adjustment on opening Order Bookings backlog	(1,060)	1,067	(1,338)	(86)
Revenue	(3,906)	(3,179)	(7,428)	(6,015)
Closing Order Bookings backlog	\$ 24,604	\$ 25,909	\$ 24,604	\$ 25,909

Volatility in exchange rates between Canadian and foreign currencies such as GBP, EUR and USD impact the business as a portion of the Company's revenues are billed in non-Canadian currencies (predominately in USD) and recognized in the Company's Unaudited Interim Condensed Consolidated Statements of Financial Position in the form of cash, receivables, and payables. The Bank of Canada average noon GBP/CAD exchange rates during the three and six months ended April 30, 2019 was \$1.7408 and \$1.7238, compared to an average of \$1.7854 and \$1.7459 in 2018. The Bank of Canada average noon EUR/CAD exchange rates during the three and six months ended April 30, 2019 was \$1.5041 and \$1.5101, compared to an average of \$1.5704 and \$1.5398 in 2018. The Bank of Canada average noon USD/CAD exchange rates during the three and six months ended April 30, 2019 was \$1.3317 and \$1.3314, compared to an average of \$1.2750 and \$1.2703 in 2018. Foreign exchange gain for the three and six months ended April 30, 2019 was \$66 and \$167 compared to a gain of \$230 and \$138 for the three and six months ended April 30, 2018.

Adjusted EBITDA for the three and six months ended April 30, 2019 was a loss of \$1,646 and \$2,500 compared to a loss of \$1,573 and \$2,684 for the three and six months ended April 30, 2018. The decrease in Adjusted EBITDA for the three months ended April 30, 2019 was driven primarily by higher cost of revenue, partially offset by higher revenue, the SIF operating grant, and lower SG&A expenses, product development and R&D. The increase in Adjusted EBITDA for the six months ended April 30, 2019 was driven primarily by higher revenue, the SIF operating grant and lower product development and R&D, partially offset by higher cost of revenue and SG&A expenses. Please refer to the Adjusted EBITDA reconciliation included later in this MD&A.

For an analysis of the risks the Company faces, please refer to the "Risk Factors" section in the Company's AIF.

## Results of Operations

### Revenue

The Company sells products in three broad categories: Subscription Services, Data Products, and Other Products and Services. Generally, Subscription Services are sold with a twelve-month period of service with revenue recognized equally over the contract term. Data Products and Other Products and Services are generally sold on an as-demanded basis and the revenue is recognized when the product is delivered to the customer, or for long-term projects, on a percentage of completion basis. Revenue for the Data Products and for the Other Products and Services tends to be less predictable and is subject to fluctuations from one period to the next.

Revenues for the three months ended April 30, 2019:

	Subscription Services	Data Products	Other Products & Services	Total Revenue
Government departments	\$ 684	\$ -	\$ 367	\$ 1,051
Commercial and other	2,497	339	19	2,855
Total revenue	\$ 3,181	\$ 339	\$ 386	\$ 3,906

Revenues for the six months ended April 30, 2019:

	Subscription Services	Data Products	Other Products & Services	Total Revenue
Government departments	\$ 1,443	\$ 4	\$ 671	\$ 2,118
Commercial and other	4,856	434	20	5,310
Total revenue	\$ 6,299	\$ 438	\$ 691	\$ 7,428

Revenues for the three months ended April 30, 2018:

	Subscription Services	Data Products	Other Products & Services	Total Revenue
Government departments	\$ 957	\$ 309	\$ 25	\$ 1,291
Commercial and other	1,606	276	6	1,888
Total revenue	\$ 2,563	\$ 585	\$ 31	\$ 3,179

Revenues for the six months ended April 30, 2018:

	Subscription Services	Data Products	Other Products & Services	Total Revenue
Government departments	\$ 1,747	\$ 322	\$ 266	\$ 2,335
Commercial and other	3,277	356	47	3,680
Total revenue	\$ 5,024	\$ 678	\$ 313	\$ 6,015

The Company's total revenue for the three and six months ended April 30, 2019 was \$3,906 and \$7,428 compared to \$3,179 and \$6,015 for the three and six months ended April 30, 2018. The Company anticipates that the commissioning of all exactView RT satellites on-board Iridium NEXT, new analytics applications for the S-AIS and maritime information services markets and sales traction within the small vessel tracking market will drive the next phase of revenue growth.

The Company's Subscription Services revenue is generally earned on a monthly recurring basis under annual or multi-year contracts and therefore provides a solid foundation for its revenue growth. Subscription Services revenue for the three and six months ended April 30, 2019, was \$3,181 and \$6,299 compared to \$2,563 and \$5,024 for the three and six months ended April 30, 2018. Subscription Services revenue represented 81% and 85% of the Company's total revenue for the three and six months ended April 30, 2019 compared to 81% and 84% for the three and six months ended April 30, 2018. The \$618 and \$1,275 increase in Subscription Services revenue was primarily due to the addition of new subscription customers.

Revenue from Data Products was \$339 and \$438 for the three and six months ended April 30, 2019, compared to \$585 and \$678 for the three and six months ended April 30, 2018. This type of revenue is generated from on-demand customer requests and is therefore variable in its timing. The decrease is due to fewer data products purchased in the three and six months ended April 30, 2019.

Revenue from Other Products & Services was \$386 and \$691 for the three and six months ended April 30, 2019 compared to \$31 and \$313 for the three and six months ended April 30, 2018. The increase is due to timing of delivery of services related to ongoing percentage of completion projects, primarily with small vessel opportunities.

#### Revenue by quarter

	Subscription Services	Data Products	Other Products & Services	Total Revenue
Q2 2017	\$ 2,326	\$ 341	\$ 1,044	\$ 3,711
Q3 2017	\$ 2,572	\$ 309	\$ 53	\$ 2,934
Q4 2017	\$ 2,681	\$ 133	\$ 38	\$ 2,852
Q1 2018	\$ 2,461	\$ 93	\$ 282	\$ 2,836
Q2 2018	\$ 2,563	\$ 585	\$ 31	\$ 3,179
Q3 2018	\$ 3,001	\$ 56	\$ 114	\$ 3,171

	Subscription Services	Data Products	Other Products & Services	Total Revenue
Q4 2018	\$ 3,273	\$ 268	\$ 228	\$ 3,769
Q1 2019	\$ 3,118	\$ 99	\$ 305	\$ 3,522
Q2 2019	\$ 3,181	\$ 339	\$ 386	\$ 3,906

The quarter-over-quarter variance in revenue is caused by the mix in the type of revenue earned in each quarter. Subscription Services revenue tends to be steady due to the generally recurring nature of those client agreements. Data Products revenue is on-demand and therefore less predictable. Other Products & Services revenue is predominantly project-based revenue and the timing of revenue recognition varies depending on the progress of the projects. For some of the Company's projects, revenue recognition is based on percentage completion calculated using costs to date as a percentage of estimated total cost. Small vessel contract revenue recognition is based on progress with the installation of Class B transponders. Therefore, revenue will vary quarter to quarter based on the progress made on the various projects.

The operating results for interim periods should not be relied upon as an indication of results to be expected or achieved in any future period or any fiscal year as a whole. The Company has experienced lower than planned revenue combined with operating losses resulting in a reduction of ongoing operating cash flows. However, in recent quarters, the trend for Subscription Services revenue has been positive as sales momentum has been generated with exactView RT, the Company's real-time S-AIS service. Factors affecting the Company's revenue and results are described in greater detail under the heading "Risks Relating to Our Business and Industry" in the Company's AIF.

#### *Gross margin*

	Three months ended April 30		Six months ended April 30	
	2019	2018	2019	2018
Gross profit	\$ 328	\$ 856	\$ 1,706	\$ 1,614
Gross margin	8.4%	26.9%	23.0%	26.8%

Gross margin for the three and six months ended April 30, 2019 was 8.4% and 23.0% compared to 26.9% and 26.8% for the three and six months ended April 30, 2018. Gross margin decreased in the three and six months ended April 30, 2019 due to increased cost of revenue, partially offset by increased revenue. Cost of revenue increased due to higher satellite operating costs related to the Second-Generation Constellation and increased terrestrial data costs, partially offset by decreased data processing and project related costs and \$186 and \$878 of SIF operating grant recognized against cost of revenue in the three and six months ended April 30, 2019. Costs increase relative to the number of satellites and ground stations, volume of data processing, and increased revenue share, rather than relative to the number of customers. Therefore, as the Company's satellite constellation expands, and Harris has declared IOC the Company expects that its cost base will grow more quickly than the growth of its revenues which will result in decreased gross margins in the short term. As the Company's customer base subsequently grows, the revenue increase is expected to exceed the cost base increase and result in higher gross margin over the long term.

#### *SG&A expenses*

SG&A expenses for the three and six months ended April 30, 2019 were \$1,818 and \$3,814 compared to \$2,170 and \$3,609 for the three and six months ended April 30, 2018. The \$352 decrease in the three months ended April 30, 2019 was primarily due to decrease in payroll related expenses that arises from lower overall headcount, decreased valuation of outstanding deferred share units and reductions in insurance, legal and consulting fees and travel expenses, partially offset by an increase in bad debt expense of \$102. The \$205 increase in SG&A expense in the six months ended April 30, 2019 was primarily due to an increase in bad debt expense of \$618, partially offset by a decrease in payroll related expenses that arises from lower overall headcount, decreased valuation of outstanding deferred share units and reductions in insurance, legal and consulting fees and travel expenses.

In the three and six months ended April 30, 2019, the bad debt expense was \$265 and \$468 and includes invoices that had aged more than 180 days and write offs due to non-payment. This compared to a bad debt expense of \$163 and recovery of \$150 in the three and six months ended April 30, 2018 due to additions to and reversals of allowances for bad debts.

### *Product development and R&D expenses*

Product development and R&D expenses for the three and six months ended April 30, 2019 were \$243 and \$536 compared to \$542 and \$959 for the three and six months ended April 30, 2018. The Company continues to focus on developing more web-based functionality as well as new analytics-based product offerings.

### *Impairment losses*

At the end of each reporting period, the Company assesses whether there are events or circumstances indicating that an asset may be impaired. Such events or circumstances notably include material adverse changes which in the long-term impact the economic environment or the Company's assumptions or objectives. The Company considers the relationship between its market capitalization and the book value of its equity, among other factors, when reviewing for indicators of impairment because the Company as a whole has been assessed as a single cash generating unit ("CGU"). The recoverable amount is the greater of value in use ("VIU") and fair value less costs of disposal.

There have been no significant developments in the quarter or significant changes to the carrying value since October 31, 2018. Accordingly, the Company did not test for impairment as at April 30, 2019 and no further impairment was recorded. For additional information, refer to note 8 (Impairment of long-lived assets).

### *Other expenses*

	Three months ended April 30			Six months ended April 30		
	2019	2018	Change	2019	2018	Change
Restructuring expense (recovery)	\$ -	\$ 5	\$ (5)	\$ -	\$ (2)	\$ 2
Foreign exchange gain	(66)	(230)	164	(167)	(138)	(29)
Interest income	(70)	(11)	(59)	(96)	(27)	(69)
Interest expense	369	18	351	592	41	551
Income tax expense	2	4	(2)	62	9	53
Total other expense	\$ 235	\$ (214)	\$ 449	\$ 391	\$ (117)	\$ 508

### *Restructuring expense (recovery)*

In November 2016, the Company announced a restructuring aimed at re-organizing and streamlining its organization in order to enhance data delivery, strengthen sales capabilities, and lower the cost base. The restructuring resulted in the termination of 14 employees effective October 13, 2016. The \$5 expense and \$2 recovery in the three and six months ended April 30, 2018 relates to the revaluation of RSUs and adjustments to benefits payable.

### *Foreign exchange (gain) loss*

Foreign exchange amounts in the Unaudited Interim Condensed Consolidated Statements of Comprehensive Loss include realized and unrealized gains and losses that result from translation of foreign denominated balances in the Company's Unaudited Interim Condensed Consolidated Statements of Financial Position. The impact of translation of outstanding foreign denominated balances in the Unaudited Interim Condensed Consolidated Statements of Financial Position and of settling foreign denominated balances into cash during the three and six months ended April 30, 2019 was a gain of \$66 and \$167 compared to a gain of \$230 and \$138 during the three and six months ended April 30, 2018.

### *Interest income*

The Company's interest income for the three and six months ended April 30, 2019 was \$70 and \$96 compared to \$11 and \$27 for the three and six months ended April 30, 2018. Interest income increased due to higher cash balances.

### *Interest expense*

The Company's interest expense for the three and six months ended April 30, 2019 was \$369 and \$592 compared to \$18 and \$41 for the three and six months ended April 30, 2018. Interest expense is increased with the addition of the SIF funding and convertible debenture, the majority of which is non-cash or long term. For additional information,

refer to note 4 (Government assistance) and note 9 (Financial instruments) in the Notes to the Unaudited Interim Condensed Consolidated Financial Statements.

#### *Income tax expense*

The Company's income tax expense for the three and six months ended April 30, 2019 was \$2 and \$62 compared to \$4 and \$9 for the three and six months ended April 30, 2018. Income tax expense increased due to withholding tax that is not expected to be recoverable.

#### *Adjusted EBITDA*

	Three months ended April 30		Six months ended April 30	
	2019	2018	2019	2018
Net loss	\$ (2,155)	\$ (2,049)	\$ (3,390)	\$ (3,648)
Interest income	(70)	(11)	(96)	(27)
Interest expense	369	18	592	41
Income tax expense	2	4	62	9
Depreciation and amortization	187	407	355	811
Unrealized foreign exchange gain	(114)	(127)	(225)	(217)
Share-based compensation	135	180	202	349
Restructuring expense (recovery)	-	5	-	(2)
Adjusted EBITDA	\$ (1,646)	\$ (1,573)	\$ (2,500)	\$ (2,684)

Adjusted EBITDA for the three and six months ended April 30, 2019, was a loss of \$1,646 and \$2,500 compared to a loss of \$1,573 and \$2,684 for the three and six months ended April 30, 2018. The decrease in Adjusted EBITDA for the three months ended April 30, 2019 was driven primarily by higher cost of revenue, partially offset by higher revenue, the SIF operating grant, and lower SG&A expenses, product development and R&D. The increase in Adjusted EBITDA for the six months ended April 30, 2019 was driven primarily by higher revenue, the SIF operating grant and lower product development and R&D, partially offset by higher cost of revenue and SG&A expenses. Management believes that Adjusted EBITDA provides a relevant measure of the results of the Company's main business activities before taking into consideration how they are financed or taxed and excluding the impact of certain non-cash expenses and items that are considered to be outside of the Company's ongoing operating results.

#### *Net loss*

Net loss was \$2,155 and \$3,390, or \$0.10 and \$0.16 per basic and diluted share, for the three and six months ended April 30, 2019, compared to \$2,049 and \$3,648, or \$0.09 and \$0.17 per basic and diluted share, for the three and six months ended April 30, 2018. The net loss increased primarily due to increased cost of revenue, SG&A and interest expense, partially offset by higher revenue and decreases in product development and R&D, and depreciation and amortization.

#### *Financial position*

The following chart outlines the changes in the Consolidated Statements of Financial Position between October 31, 2018 and April 30, 2019:

	Increase/ (Decrease)	Explanation
Cash	\$ 8,698	The increase in cash is due to collections and net proceeds from the convertible debenture, partially offset by ongoing operational expenses.
Accounts receivable	\$ 1,568	The accounts receivable balance fluctuates with changes in billings and collections.

	Increase/ (Decrease)	Explanation
Unbilled revenue	\$ 311	The unbilled revenue reflects the amount of revenue recognized in advance of billings.
Prepaid expenses	\$ 322	The increase primarily relates to the insurance renewal in the second quarter of 2019, partially offset by expenses recognized.
Other assets (current and non-current)	\$ 127	The increase relates to capitalized sales commission under IFRS 15, partially offset by commission expensed in the period and the decrease in capitalized transponder costs upon installation.
Property, plant and equipment	\$ 393	The increase in property, plant and equipment is due to additions of \$789 and a net translation of \$2, offset by SIF funding of \$137 and depreciation of \$261.
Intangible assets	\$ (84)	The decrease in intangible assets is due to depreciation of \$94, offset by additions of \$10.
Accounts payable and accrued liabilities (current and non-current)	\$ 1,478	The balance fluctuates based on timing of goods and services received and payments.
Deferred revenue	\$ (139)	Deferred revenue reflects billings that occur in advance of revenue recognition.
Loans payable (current and non-current)	\$ 9,189	The increase is due to the convertible debenture and the SIF loan, partially offset by principal payments made on the FED DEV loan.
Long-term incentive plans (current and non-current)	\$ (28)	The decrease is due to the revaluation of previously accrued units due to a decrease in stock price and settlement of deferred share units, partially offset by continuing accrual of deferred share units payable.
Contributed surplus	\$ 3,057	The increase is related to the convertible debenture net of fair value and expense recognized on RSUs and stock options during the six months ended April 30, 2019. Stock options and RSUs will be equity settled.
Accumulated other comprehensive loss	\$ (117)	The decrease is due to the foreign exchange translation of the Company's subsidiary.
Deficit	\$ (3,118)	The decrease represents net loss of \$3,390, offset by the impact of a change in accounting policy upon adoption of IFRS 15 of \$272.

#### *Liquidity and capital resources*

The key liquidity and capital resource items are as follows:

	April 30, 2019	October 31, 2018	% Change
Cash	\$ 13,472	\$ 4,774	182%
Short-term investments	\$ 49	\$ 49	-
Trade accounts receivable	\$ 5,059	\$ 3,491	45%
Prepaid expenses	\$ 629	\$ 307	105%
Other assets – current	\$ 248	347	(29%)
Accounts payable and accrued liabilities	\$ 6,258	\$ 4,780	31%
Loans payable – current	\$ 436	\$ 459	(5%)

### Working capital

Working capital increased \$9,493 during the three and six months ended April 30, 2019 to \$11,710. The increase since October 31, 2018 is driven by the following:

	Increase / (Decrease) to working capital
Increase in cash	\$ 8,698
Increase in trade accounts receivable	1,568
Increase in unbilled revenue	311
Increase in prepaid expenses	322
Decrease in other assets	(99)
Increase in accounts payable and accrued liabilities	(1,478)
Decrease in deferred revenue	139
All other	32
Total	\$ 9,493

Current assets are available at varying times within twelve months following the balance sheet date. Cash is readily available to settle obligations related to current and future expenditures.

### Significant cash flows:

	Three months ended April 30		Six months ended April 30	
	2019	2018	2019	2018
Cash used in operating activities	\$ (829)	\$ (708)	\$ (3,019)	\$ (1,618)
Cash used in investing activities	(141)	(351)	(20)	(352)
Cash (used in) from financing activities	(82)	(181)	11,649	(392)
Effect of exchange rate changes on cash	55	90	88	93
Net (decrease) increase in cash	\$ (997)	\$ (1,150)	\$ 8,698	\$ (2,269)
Cash, beginning of the period	14,469	6,998	4,774	8,117
Cash, end of the period	\$ 13,472	\$ 5,848	\$ 13,472	\$ 5,848

The Company manages its liquidity and capital resources to provide sufficient cash to meet short and long-term operating and development plans, debt obligations, and other contractual obligations when due. Prior to the completion of the Spinout Transaction, the Company used loans from shareholders as primary sources of liquidity. On October 18, 2018, the company signed a loan agreement with SIF to receive funding for certain expenditures incurred from February 13, 2018 to February 12, 2021 to a maximum of \$7,206. On December 13, 2018 the Company completed an offering of Convertible Debentures at a price of \$1 per Convertible Debenture for gross proceeds of \$13,000, and net proceeds after financing costs of \$11,854 to fund short-term operating costs. As a result of this recent funding management believes capital resources as of the date of this MD&A are sufficient to fund current operations, forecasted capital expenditures, and contractual obligations in 2019. For additional information, refer to note 4 (Government assistance) and note 9 (Financial instruments) in the Notes to the Unaudited Interim Condensed Consolidated Financial Statements.

With respect to longer-term funding requirements, the Company believes future cash flows generated from operations and other sources of liquidity will be available. Under present conditions, the Company believes it has sufficient access to capital and debt markets. There is a risk that the cost of obtaining capital resources from capital and debt markets may increase in the future as lenders and institutional investors may increase interest rates, impose tighter lending standards, or refuse to provide any new funding. Despite present market conditions, changes in the

Company's business, unforeseen opportunities or events, and other external factors may also adversely affect liquidity and the availability of additional capital resources. Due to these factors, the Company cannot be certain that funding, if needed, will be available to the extent required, or on acceptable terms. If the Company is unable to access funding when needed on acceptable terms, the Company may not be able to fully implement current business plans, take advantage of business opportunities, or respond to competitive pressures, any of which could have a material adverse effect on the Company's operational and financial results. No assurance can be given that the Company will be successful in meeting sales targets, reducing costs or obtaining additional financing either through debt or equity. The Company has experienced losses and negative cash flows from operations. However, the Company may elect to reduce its planned expenditures concurrent with prevailing conditions. The Company believes that this financial flexibility to adjust its spending levels will provide it with sufficient liquidity to meet its future operational goals and financial obligations. For additional information, refer to note 2 b) (Significant Accounting Policies, Basis of presentation) in the Notes to the Unaudited Interim Condensed Consolidated Financial Statements.

#### *Operating activities*

Cash flows used in operations for the three and six months ended April 30, 2019 was \$829 and \$3,019, compared to cash used in operations of \$708 and \$1,618 for the three and six months ended April 30, 2018. The increase in cash used in operations was primarily due to working capital changes.

#### *Investing activities*

Cash flows used in investing activities for the three and six months ended April 30, 2019 were \$141 and \$20 compared to \$351 and \$352 used in investing activities for the three and six months ended April 30, 2018. The cash used includes the acquisitions of long-lived assets, offset by reimbursement from LuxSpace related to EV-10.

#### *Financing activities*

There were \$82 in cash flows used for financing activities and \$11,649 in cash flows from financing activities in the three and six months ended April 30, 2019, compared to \$181 and \$392 used for financing in the three and six months ended April 30, 2018. Financing cash flows in 2019 were related to the convertible debenture advance, offset by issue costs and the repayment of long-term debt.

#### *Contractual obligations*

The following table outlines the contractual cash obligations (excluding accounts payable and accrued liabilities) as at April 30, 2019:

	Total	Less than one year	2-3 years	4-5 years	>5 years
Lease obligations	\$ 317	\$ 128	\$ 189	\$ -	\$ -
Loans payable	26,118	842	910	17,160	7,206
Capital commitments	3,393	(147)	723	1,878	939
Harris commitment	49,509	4,027	8,054	8,054	29,374
Hispdesat commitment	2,300	240	480	480	1,100
<b>Total contractual obligations</b>	<b>\$ 81,638</b>	<b>\$ 5,090</b>	<b>\$ 10,356</b>	<b>\$ 27,572</b>	<b>\$ 38,619</b>

As at April 30, 2019, the Company had various contractual cash obligations, including loans payable, capital commitments and commitment under the Harris Agreement. For additional information, refer to note 4 (Government assistance) and note 11 (Commitments and contingencies) in the Notes to the Unaudited Interim Condensed Consolidated Financial Statements.

#### *Credit facilities*

The company holds two Guaranteed Investment Certificates totalling \$49 from CIBC as collateral for a line of credit for \$29 and other credit facilities of \$20.

### *Off-balance sheet arrangements*

As at April 30, 2019, the Company does not have any off-balance sheet arrangements, other than operating leases as disclosed in note 11 (Commitments and contingencies) in the Notes to the Unaudited Interim Condensed Consolidated Financial Statements.

### *Proposed transactions*

The Company did not have any proposed transactions as at April 30, 2019.

## **Summary of Significant Accounting Policies**

### *Critical accounting estimates*

The preparation of the Company's Unaudited Interim Condensed Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities. These estimates are based upon management's historical experience and various other assumptions that are believed by management to be reasonable under the circumstances. Such assumptions and estimates are evaluated on an ongoing basis and form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources as well as the periodic recognition of revenue and cost of revenue. Actual results could differ from these estimates.

The Company believes the following critical accounting policies affect the more significant estimates and assumptions used in the preparation of its Unaudited Interim Condensed Consolidated Financial Statements.

### *Revenue recognition*

Effective November 1, 2018, the Company adopted IFRS 15 *Revenue from Contracts with Customers* ("IFRS 15") using the modified retrospective approach in its Unaudited Interim Condensed Consolidated Financial Statements. As a result, the after-tax cumulative effect of initially applying IFRS 15 was recognized as an adjustment to opening deficit as at November 1, 2018. Comparative information has not been restated and continues to be reported under IAS 18, *Revenue* and IAS 11, *Construction Contracts*.

The Company used a practical expedient, as permitted in the transition requirements, to apply IFRS 15 only to contracts not completed at November 1, 2018.

Revenue is recognized through the application of the following steps: (i) identification of the contract, or contracts, with a customer; (ii) identification of the performance obligations in the contract; (iii) determination of the transaction price; (iv) allocation of the transaction price to the performance obligations in the contract; and (v) recognition of revenue when, or as the Company satisfies a performance obligation. The Company assesses its revenue arrangements against specific criteria in order to determine if it is acting as principal or agent.

A contract exists with a customer when both parties have approved the contract, commitments to performance and rights of each party (including payment terms) are identified, the contract has commercial substance and collection of substantially all consideration is probable for goods and services that are transferred.

Performance obligations promised in a contract are identified based on the goods and services that will be transferred to the customer that are both capable of being distinct, whereby the customer can benefit from the good or service either on its own or together with other available resources, and are distinct in the context of the contract, whereby the transfer of the good or service is separately identifiable from other promises in the contract. If these criteria are not met, the promised goods and services are accounted for as a combined performance obligation.

The transaction price is determined based on the consideration the Company expects to be entitled to in exchange for transferring promised goods and services to the customer, excluding amounts collected on behalf of third parties such as sales taxes. Determining the allocation of transaction price requires significant judgment. Consideration in contracts with multiple performance obligations is allocated to the separate performance obligations based on estimates of stand-alone selling prices ("SSP"). To the extent the transaction price includes variable consideration, the Company estimates the amount of variable consideration and includes the estimated revenue to the extent it is highly probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated

with the variable consideration is resolved. Estimates of variable consideration are based on historical experience, anticipated performance, and management's best judgment based on the information available at the time.

Control of goods and services can be transferred at a point in time or over time. Control is the ability to direct the use of, and obtain the benefits from, an asset. The method and timing of transfer of control determines whether to recognize revenue at a point in time for each performance obligation or whether to use a measure of progress toward completion to recognize revenue over time.

#### Sale of data

The majority of revenue is derived from the sale of data subscriptions. Customers simultaneously receive and consume data subscriptions; therefore, performance obligations are satisfied over time. Revenue is recognized upon delivery for non-subscription data sales, which are performance obligations satisfied at a point in time upon transfer of control.

The Company may enter into contracts involving multiple performance obligations, such as products or services including data subscriptions and sales of historic archive data or sales of Class B transponders and data. Consideration is allocated to the separate performance obligations based on estimates of SSP. The primary method used to estimate the SSP is consideration of sales of the products or services on a stand-alone basis, and the Company's pricing policies.

Timing of revenue recognition may differ from the timing of invoicing to customers. Contract assets are generated when contractual billing schedules differ from revenue recognition timing. Unbilled revenue is recorded in instances when revenue is recognized prior to invoicing, and amounts collected in advance of services being provided are recorded as deferred revenue.

#### Deferred contract costs

Deferred contract costs are amortized over the period of expected benefit. Contract costs are deferred if the costs are expected to be recoverable and if either of the following criteria are met:

- The costs of obtaining the contract are incremental or explicitly chargeable to the customer; or
- The fulfillment costs relate directly to the contract or an anticipated contract and generate or enhance the Company's resources that will be used in satisfying the performance obligations in the future.

#### Long-term fixed-price contracts

The Company occasionally provides goods and services to its customers under long-term, fixed-price contracts. The Company accounts for its revenue from fixed-fee contracts using the percentage of completion method, which requires estimates to be made for contract costs and revenue. Contract costs include direct labour and direct costs for subconsultants, and other expenditures that are recoverable directly from clients. Progress on jobs is regularly reviewed by management and estimated costs to complete are revised based on the information available at the end of each reporting period. Contract cost estimates are based on various assumptions that can result in a change to contract profitability from one financial reporting period to another. Estimating total costs is subjective and requires management's best judgments based on the information available at that time. On an ongoing basis, estimated revenue is updated to reflect the amount of consideration the Company expects to be entitled to in exchange for providing goods and services. Losses on such contracts are accrued when the estimate of total costs indicates that a loss will be realized. Accruals are drawn down as loss contracts progress. Contract billings received in excess of recognized revenue are included in current liabilities as deferred revenue. Contract progress in excess of billings made is recognized in current assets as unbilled revenue.

#### Significant accounting judgments, estimates, and assumptions

Revenue is adjusted for the effects of a significant financing component when the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. Judgement is required to determine whether a contract contains a significant financing component and the

discount rate to be applied when adjusting the promised consideration for the significant financing component.

Consideration in contracts with multiple performance obligations is allocated to the separate performance obligations based on estimates of SSP and comparable historical sales of a similar nature. Judgment is required to determine the SSP for each distinct performance obligation. The Company's products and services often have observable SSP when the Company sells a promised product or service separately to similar customers. A contractually stated price or list price for a good or service may be the SSP of that good or service. However, in instances where SSP is not directly observable, the Company determines the SSP by maximizing observable inputs and using an approach using information that may include market conditions and other observable inputs from the Company's pricing team, including historical SSP.

Capitalized commission costs are amortized over the period of expected benefit. Estimating the costs to be deferred and the period of expected benefit is subjective and requires the use of management's best judgments based on information available at that time.

Changes in estimates are reflected in the period in which the circumstances that give rise to the change become known and affect the Company's revenue, unbilled receivables, contract assets, and deferred revenue.

#### *Allowance for doubtful accounts*

The Company establishes an allowance for doubtful accounts taking into consideration aging of the receivables, communications with customers, credit issues, and historical losses. Expected credit loss ("ECL") is based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Company expects to receive.

#### *Useful life of intangible and long-term assets*

The Company has established policies for determining the useful life of its intangible and long-term assets, and amortizes the costs of these assets over those useful lives. The useful life for each category of asset is determined based on the expectation of its ability to continue to generate revenues, and thus, cash flows. This ability is tested periodically to ensure the conditions still exist to allow the asset to be reflected at its net-recorded value in the Company's accounts, and any impairment to the valuation is reflected in such accounts at the time the impairment is determined.

#### *Recoverable amount for long-lived assets*

An asset's recoverable amount is the higher of an asset's or CGU's fair value less costs to sell and its value in use, and is determined for an individual asset or at the CGU level if individual assets do not have largely independent cash inflows. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or CGU. In determining fair value less costs to sell, recent market transactions are taken into account, if available. If no such transactions can be identified, an appropriate valuation model is used. Given the Company is a single CGU, the market capitalization of the Company is a relevant measure of FVLCS.

#### *Capitalization of development costs*

When capitalizing development costs, the Company must assess the technical and commercial feasibility of the projects and estimate the useful lives of resulting products. Determining whether future economic benefits will flow from the assets, and therefore, the estimates and assumptions associated with these calculations are instrumental in: (i) deciding whether project costs can be capitalized, and (ii) accurately calculating the useful life of the Company's projects.

#### *Financial instruments*

Effective November 1, 2018, the Company has adopted IFRS 9 *Financial Instruments* ("IFRS 9") in its Unaudited Interim Condensed Consolidated Financial Statements. IFRS 9 introduces new requirements for the classification, and

measurement of financial assets and financial liabilities, including derecognition. The new standard also includes a single expected-loss impairment model. IFRS 9 replaces IAS 39, *Financial instruments: recognition and measurement* (“IAS 39”) and significantly amends other standards dealing with financial instruments such as IFRS 7, *Financial Instruments: Disclosures*.

#### Classification and measurement

Financial assets are initially recognized at fair value plus directly applicable transaction costs, except for financial assets at fair value through profit and loss (“**FVPL**”), for which transaction costs are expensed.

Subsequent measurement of financial assets under IFRS 9 is at FVPL, amortized cost, or fair value through other comprehensive income (“**FVOCI**”). The classification is based on two criteria: the Company’s business approach for managing the financial assets; and whether the instruments’ contractual cash flows represent “solely payments of principal and interest” on the principal amount outstanding (the “**SPPI**” criterion). The business approach considers whether a Company’s objective is to receive cash flows from holding assets, from selling assets in a portfolio, or a combination of both.

- Amortized cost: Assets held for collection of contractual cash flows, when they meet the SPPI criterion, are measured at amortized cost. Items in this category include cash and cash equivalents, short-term investments, trade accounts receivables, and other assets.
- FVOCI: Assets held within a business approach both to collect cash flows and sell the assets, when they meet the SPPI criterion, are measured at FVOCI. Interest income from these financial assets is included in finance income using the effective interest rate method. Impairment and foreign exchange gains and losses are reported in income.
- FVPL: Assets that do not meet the criteria for amortized cost or FVOCI are measured at FVPL with realized and unrealized gains and losses reported in income.

The Company reclassifies financial assets only when its business approach for managing those assets changes

#### Impairment under IFRS 9

The adoption of IFRS 9 changed the Company’s accounting for impairment losses for financial assets by replacing IAS 39’s incurred loss approach with the forward-looking ECL. Accounts receivable and unbilled revenue, and other assets are subject to the new ECL model.

IFRS 9 requires the Company to record an allowance for ECL either based on a 12-month ECL or on a lifetime ECL. Assets within the scope of IFRS 9 that are considered to have low credit risk have an impairment provision recognized during the period limited to 12-months ECLs. However, when there has been a significant increase in credit risk since origination, the allowance will be based on the lifetime ECL. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Company expects to receive.

For trade accounts receivable, unbilled revenue, and other assets, the Company applies the simplified approach permitted by IFRS 9, which requires lifetime ECLs to be recognized from initial recognition.

#### *Convertible debentures*

IAS 32, *Financial instruments: presentation*, requires the issuer of a non-derivative financial instrument to evaluate the terms of the financial instrument to determine whether it contains both a liability and an equity component. This evaluation is based on the contractual terms of the financial instrument, the substance of the arrangement and the definition of a financial liability, financial asset and an equity instrument. If such components are identified, they must be accounted for separately as financial liabilities, financial assets or equity.

The liability component of the Company’s convertible debentures is measured at the fair value of a similar liability that does not have an associated equity conversion feature. The equity component is allocated the residual difference between the difference between the fair value of the compound instrument (total issue proceeds) and the liability component. The equity component is credited directly to equity and is not subsequently remeasured nor reclassified to profit or loss.

Transaction costs that relate to the issue of a compound financial instrument are allocated to the liability and equity components of the instrument in proportion to the allocation of proceeds. Transaction costs are incremental costs that are directly attributable to the acquisition, issue or disposal of a financial asset or liability and includes fees and commissions paid to agents (including employees acting as selling agents), advisers, brokers, and dealers.

The initial carrying amount of the Company's convertible debenture is adjusted for transaction costs. Transaction costs related to the liability component are included in the calculation of the amortized cost using the effective interest method, and included in interest expense recognized over the life of the instrument. Transaction costs allocated to the equity component are offset against the amount recognized in equity.

### Changes in Accounting Policies Including Initial Adoption

The Company has adopted the new and amended IFRS as listed below as at November 1, 2018, in accordance with the transitional provisions outlined in the respective standards. There were no other changes to accounting policies during the three and six months ended April 30, 2019 compared to the accounting policies applied in the audited Consolidated Financial Statements for the year ended October 31, 2018.

#### *Changes to accounting policies*

##### IFRS 15, Revenue from contracts with customers

On adoption of IFRS 15, the after-tax impact on opening retained earning reduced the deficit as follows:

Retained deficit	November 1, 2018
Capitalization of costs to acquire contracts	\$ 221
Contract modification	13
Contract duration and variable consideration	38
Total impact of change in accounting policy	\$ 272

#### Capitalization of costs to acquire contracts

Under IFRS 15, the Company capitalizes and amortizes commission costs that relate to contracts on a systematic basis, consistent with the pattern of transfer of the goods or services to which the commission costs relate.

Capitalized commission costs are included in other assets and other long-term assets in the Unaudited Interim Condensed Consolidated Statements of Financial Position and amortized over the period of expected benefit using the estimated customer life which typically aligns to the term of the related revenue contract. Amortization of capitalized commission costs is included in selling, general and administrative costs in the Unaudited Interim Condensed Consolidated Statements of Loss and Comprehensive Loss.

#### Contract modification

Contract modifications are assessed under IFRS 15 based on whether the new promised goods or services are distinct, and whether the price reflects the SSP. A modification that results in a new distinct performance obligation, where the price of the modification represents the SSP, is accounted for as a separate contract. A modification that results in a new distinct performance obligation, but that does not represent the SSP, requires the termination of the original contract and the allocation of remaining consideration to the remaining performance obligations from the original contract and the modification. If the modification is does not results in a new distinct performance obligation, the transaction price is updated as well as the measure of progress and through a cumulative true-up to revenue.

#### Contract duration and variable consideration

The Company generates revenue from data subscription contracts in which data is typically provided over time. The contract duration under IFRS 15 is the period both parties have enforceable rights and obligations. Given the nature of the Company's contractual terms for data subscriptions, the duration of the contract for revenue recognition may differ from the stated contractual term which could affect the amount of revenue recognized where the Company's contractual prices vary over the stated contract term. Revenue is measured based on the consideration the Company expects to be entitled to in exchange for providing data, excluding taxes collected from clients, which are reimbursable to government authorities.

Variable consideration is estimated by determining the most likely amount the Company expects to be entitled to unless the contract includes a range of possible outcomes for performance-based amounts. In that case, the expected value is determined using a probability weighting of the range of possible outcomes. Variable consideration is included in estimated revenue to the extent it is highly probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. Estimates of variable consideration are based on historical experience, anticipated performance, and management's best judgment based on the information available at the time.

For additional information, refer to note 3 (Changes to accounting policies and future accounting changes) in the Notes to the Unaudited Interim Condensed Consolidated Financial Statements.

#### IFRS 9, Financial instruments

The Company has adopted IFRS 9 in its Unaudited Interim Condensed Consolidated Financial Statements for the annual period beginning on November 1, 2018. IFRS 9 addresses the classification, measurement and recognition of financial assets and financial liabilities. IFRS 9 replaces the parts of IAS 39 that relate to the classification and measurement of financial instruments. IFRS 9 requires financial assets to be classified into two measurement categories:

- Financial assets measured at fair value; or
- Financial assets measured at amortized cost.

The determination is made at initial recognition. The classification depends on the entity's business model for managing its financial instruments and the contractual cash flow characteristics of the instrument. The business model assessment was completed based on the facts and circumstances which existed as at the initial date of application. For financial liabilities, the standard retains most of the IAS 39 requirements.

IFRS 9 replaces the "incurred loss" model under IAS 39 with an ECL model as it relates to the impairment of financial assets. The new impairment model does not apply to equity investments. The Company's trade accounts receivable generally have a maturity date of 90 days or less, therefore the adoption of this model did not impact the Company's Unaudited Interim Condensed Consolidated Financial Statements.

Changes in accounting policies resulting from the adoption of IFRS 9 have been applied retrospectively. However, in accordance with the IFRS 9 transitional provisions, the Company has elected not to restate the comparative periods. Financial instruments derecognized prior to the effective date were accounted for in accordance with IAS 39, as permitted under the transitional provisions of IFRS 9. The IFRS 9 adoption did not impact the measurement or carrying amounts of financial instruments and therefore did not impact deficit.

For additional information, refer to note 3 (Changes to accounting policies and future accounting changes) in the Notes to the Unaudited Interim Condensed Consolidated Financial Statements.

#### *Future changes to accounting policies*

A number of new standards, amendments to standards and interpretations are not effective for the Company and have not been applied in preparing the Consolidated Financial Statements. The following standards and interpretations have been issued by the International Accounting Standards Board ("**IASB**") and the International Financial Reporting Interpretations Committees with effective dates relating to the annual accounting periods starting on or after the effective dates as follows:

#### IFRS 16, Leases ("**IFRS 16**")

IFRS 16 is a new standard effective for fiscal years beginning on or after January 1, 2019 and may be early adopted for companies that also apply IFRS 15. The standard replaces current guidance under IAS 17, *Leases* ("**IAS 17**") and no longer distinguishes between a finance lease and an operating lease for lessees. Instead, for virtually all lease contracts the lessee recognizes a lease liability reflecting future lease payments and a "right-of-use" asset. Lessor accounting remains somewhat similar as under IAS 17. The Company intends to adopt IFRS 16 in its consolidated financial statements for the annual period beginning on November 1, 2019. The extent of the impact on the Consolidated Financial Statements of adoption of the standard has not yet been determined. However, the

Company believes that on adoption of IFRS 16 there will be an increase to assets and liabilities on the Consolidated Statements of Financial Position to reflect the right-of-use asset and corresponding lease liability.

#### International Financial Reporting Interpretations Committee 23, Uncertainty over Income Tax Treatments

Uncertainty over Income Tax Treatments provides guidance when there is uncertainty over income tax treatments including (but not limited to) whether uncertain tax treatments should be considered separately; assumptions made about the examination of tax treatments by tax authorities; the determination of taxable profit, tax bases, unused tax losses, unused tax credits, and tax rates; and the impact of changes in facts and circumstances. The new interpretation is effective for annual periods beginning on or after January 1, 2019. The Company is currently assessing the impact of the new interpretation in its Consolidated Financial Statements.

### **CONTROLS AND PROCEDURES**

#### **Disclosure controls and procedures**

The Company's disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed by the Company in reports filed under Canadian securities laws is recorded, processed, summarized and reported within the time periods specified under those laws, and include controls and procedures that are designed to ensure that information is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

#### **Management's report on internal control over financial reporting**

Internal control over financial reporting is designed to provide reasonable, but not absolute, assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with IFRS. Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements on a timely basis. The Company used the Committee of Sponsoring Organizations of the Treadway Commission (COSO) 2013 framework to evaluate the effectiveness of internal control over financial reporting.

#### **Changes in internal controls over financial reporting**

The Company made no changes to internal controls over financial reporting during the quarter ended April 30, 2019, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

### **OUTSTANDING SHARE DATA**

The number of issued and outstanding common shares was 21,728,654 as of the date of this MD&A.