Annual Report

2019

exactEarth®

Table of Contents

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

*The following management discussion and analysis ("**MD&A**") is prepared as of January 28, 2020 and provides information that management believes is relevant to an assessment and understanding of the Company's operations and financial condition for the year ended October 31, 2019. This MD&A should be read in conjunction with the Company's Consolidated Financial Statements, including the notes thereto, (the "**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 dollar 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 October 31, 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 28, 2020 and other filings available on SEDAR at 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; potential impact of the amendments to the Original L3Harris Agreement; expected useful lives of satellite assets and 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 contracts for the supply of products and services to its customers. 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 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 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.

<u>Key Components and Functions of the Company's Product Offering</u>

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, the number of potentially trackable vessels will increase to more than one million.

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 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, provided 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 and from payloads on the iridum NEXT constellation. The first satellite, EV-0 was launched in 2008 by exactEarth's previous parent company, COM DEV International Ltd., for the purpose of validating the concept of collecting maritime AIS signals from space. EV-0 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 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.

In February 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 in February 2018, and commissioning was completed in December 2018. EV-8 is operated by Hisdesat Servicios Estratégicos, S.A. ("**Hisdesat**"), a Spanish-based provider of satellite communications services to government agencies and one of the Company's significant shareholders. EV-7 was launched in June 2016 and commissioning was completed in May 2019.

All 58 of the payloads in the Company's Second-Generation Constellation of satellites using exactView™ RT ("**exactView RT**") Powered by L3Harris Technologies, Inc. ("**L3Harris**") have been launched into orbit on the Iridium NEXT constellation. This brings the total number of satellites in service as of January 28, 2020 to 65 (seven First-Generation plus 58 Second-Generation).

The Company's collaboration with L3Harris 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 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 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 L3Harris Satellite Operations Control ("**L3HSOC**"). The exactView RT feed from L3HSOC 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 it believes 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 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 one-time sales of data and customized reports. Revenue from the sale of these products is generally recognized when they are delivered to the customer and is not generally 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

L3Harris

In June 2015 the Company announced an agreement with L3Harris (the "**Original L3Harris 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 L3Harris' powerful AppStar applications platform and employ 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 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 Original L3Harris Agreement, the two companies share their respective AIS product revenue with each other. In February 2019, L3Harris 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 L3Harris 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 L3Harris, and that L3Harris will share 18% of Class A and 50% of non-Class A revenue with the Company. The Original L3Harris Agreement also stipulates that the Company will pay L3Harris 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 had given notice to L3Harris that there are several capabilities and service level improvements that need to be rectified.

In January 2020 the Company, announced that it has reached agreement on updated terms to the Original L3Harris Agreement, the amended and restated L3Harris Agreement ("**A&R L3Harris Agreement**"). This amended agreement provides the Company with a reduced and simplified cost structure for exactView RT S-AIS data services going forward. The amended agreement also opens up additional growth opportunities for both parties.

Key Terms of A&R L3Harris Agreement

Key Term Element	Original L3Harris Agreement (June 2015)	A&R L3Harris Agreement (January 2020)
Fixed Payment to L3Harris ("**Infrastructure Fee**")*	USD $750 per quarter.	USD $1,075 per quarter.
S-AIS Revenue Share to L3Harris*	40% revenue share on 1st USD $40,000 of annual S-AIS revenue. 33% revenue share on annual S-AIS revenue portion above USD $40,000.	No revenue share on 1st USD $16,000 of annual S-AIS revenue. 30% revenue share on annual S-AIS revenue portion above USD $16,000.

Key Term Element	Original L3Harris Agreement (June 2015)	A&R L3Harris Agreement (January 2020)
S-AIS Revenue Share from L3Harris*	18% of L3Harris S-AIS data revenues.	No revenue share from L3Harris.
Revenue Minimums	Defined minimums to be achieved by February 2024.	Requirement deleted.
Exclusive Market Territory	L3Harris: US Government for S-AIS data and analytics. exactEarth: Rest of world Government and all Commercial markets for S-AIS data and analytics.	No change in exclusive market territories for S-AIS data. No territory restrictions for AIS analytics for either Party.
Use of Excess Satellite Payload Capacity for New Non-AIS Services	Parties to negotiate terms and revenue share for new services proposed by either Party.	No change in terms for exactEarth-initiated new services. L3Harris free to initiate services without revenue share to the Company.

**Infrastructure Fee and Revenue Share amendments are effective August 1, 2019.*

Fixed Fees and Revenue Shares

The parties agree that full deployment of the system has been achieved and that initial operational capacity (“IOC”) has occurred.

The fixed fee of USD $750 per quarter under the Original L3Harris Agreement is replaced by a fixed fee of USD $358 per month (USD $1,075 per quarter) under the A&R L3Harris Agreement.

Under the revised agreement, the Company will no longer be required to pay any revenue share on the first USD $16,000 of annual S-AIS data revenue. This compares with our prior agreement under which we paid a 40% revenue share on annual S-AIS revenue. Moreover, our revenue share percentage is reduced to 30% for annual S-AIS revenue above USD $16,000. Also, under the revised agreement the annual, fixed operational fee paid to L3Harris has been increased from USD $3,000 to USD $4,300 and the revenue share from L3Harris has been eliminated. For reference purposes, in the year ended October 31, 2019, the amount of the Company’s S-AIS data revenue eligible for the purpose of calculating revenue share owed to L3Harris was USD $8,518.

Under the Original L3Harris Agreement, L3Harris paid the Company an 18% share of all L3Harris S-AIS data revenue and under the A&R L3Harris Agreement, the Company will receive no share of L3Harris S-AIS data revenues. Under the A&R L3Harris Agreement no revenue share is owed by either party to the other with respect to AIS Analytics sales. For reference purposes, included in the FY19 revenue is $340 of revenue from L3Harris.

Fixed fee and revenue share amendments in the A&R L3Harris Agreement are effective as at August 1, 2019. Adjustments to those amounts recorded in the October 31, 2019 Consolidated Financial Statements in relation to the Original L3Harris Agreement that were affected by the A&R L3Harris Agreement will be made in the January 31, 2020 Interim Condensed Consolidated Financial Statements.

Under the Original L3Harris Agreement both parties were subject to achieving defined minimum revenue levels for S-AIS product revenues. Under the A&R L3Harris Agreement this requirement has been removed.

Exclusive Market Territory

Under the Original L3Harris Agreement, exclusive market territories were defined with respect to AIS data services and for AIS Analytics. Under the A&R L3Harris Agreement the exclusive market territories for AIS data services remain the same but the territory restrictions are removed for AIS Analytics so that neither Party is restricted by territorial limitations in the sale of AIS Analytics products.

Use of Excess Satellite Payload Capacity

This refers to the use of Satellite Payload capacity, which is not utilized to provide the S-AIS capability, in order to implement other services. The Original L3Harris Agreement called for the parties to negotiate terms with respect to any such new service which would utilize Excess Satellite Payload Capacity and L3Harris had reserved 10% of Excess Satellite Payload Capacity for its use. Under the A&R L3Harris Agreement, L3Harris has the right to utilize all Excess Satellite Payload Capacity for its own uses without any payments to the Company providing that such use does not impact the S-AIS service level performance. The Company also has the right to bring forward new service concepts and negotiate terms with L3Harris providing that there is Excess Satellite Payload Capacity available at that time.

Please refer to the Company's AIF for details pertaining to the Original and A&R L3Harris Agreements. For additional information, refer to note 12 (Commitments and contingencies) and note 19 (Subsequent events) in the Notes to the Consolidated Financial Statements.

*Myriota Pty Ltd. ("**Myriota**")*

In November 2015, the Company announced a $2,000 Australian dollar ("**AUD**") (CAD$1,894) minority ownership investment in technology company, Myriota Pty Ltd. 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 Company allocated the investment of AUD$2,000 to the technology licence, classified as an intangible asset. 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 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 2021 and royalties will begin at that time. Myriota completed an AUD$20,000 equity raise in April 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 32%. For additional information, refer to note 5 (Investment) and note 7 (Intangible assets) in the Notes to the Consolidated Financial Statements.

In June 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 terms of 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, which can be marketed and sold by both parties. IHSMarkit has a significant market presence and the Company anticipates that the relationship with IHSMarkit will generate orders growth in future quarters.

*Exmile Solutions Ltd. ("**MarineTraffic**")*

In April 2019, the Company entered into a three-year channel partner agreement with MarineTraffic, which owns the world's preeminent ship-tracking website. The MarineTraffic website 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.

<u>Funding sources</u>

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 a Special Committee of the Board, 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 (Loans payable, financial instruments and foreign exchange) in the Notes to the Consolidated Financial Statements.

In October 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 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 and a further $1,222 was received in the year ended October 31, 2019. The Company has a receivable of $881 for claimed and unclaimed funding related to expenses incurred and paid prior to October 31, 2019 in the Consolidated Statements of Financial Position (October 31, 2018 – $128). 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 $878 at October 31, 2019 (October 31, 2018 – $336). 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 $1,363 and a capital grant of $136 during the year ended October 31, 2019 (October 31, 2018 – operating grant of $1,154 and capital grant of $63). For additional information, refer to note 4 (Government assistance) and note 9 (Loans payable, financial instruments and foreign exchange) in the Notes to the Consolidated Financial Statements.

In May 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 year ended October 31, 2019 was nil (October 31, 2018 – $202).

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.

The number of full-time employees at October 31, 2019 was 36 (October 31, 2018 – 40).

Overall Performance

Revenue was $15,197 for the year ended October 31, 2019, compared to $12,955 for the year ended October 31, 2018. The Company's major application market segments are government and commercial. Government customers contributed $3,706 to the revenue for the year ended October 31, 2019, compared to $4,361 for the year ended October 31, 2018. Commercial revenue for the year ended October 31, 2019 was $11,491 compared to $8,594 for the year ended October 31, 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 October 31, 2019 is $22,354, compared to $31,482 of Order Bookings backlog reported at October 31, 2018. Existing Order Bookings adjustments in the year ended October 31, 2019 were primarily related to the renegotiation of long-term contracts. Revenue of $10,055 from the current Order Bookings backlog is forecasted to be earned in earned in 2020. The balance of $12,299 is expected to be earned between 2021 and 2027. Subsequent to the end of the fiscal year, the Company received orders from a number of customers including, India, EMSA, Denmark and others that will drive revenue during fiscal 2020. As of January 28, 2020, firm order bookings in Q1 2020 totalled approximately $6,600.

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 October 31, 2019 were: GBP $1.7043, EUR $1.4706, USD $1.3169, while the foreign exchange rates at October 31, 2018 were: GBP $1.6775, EUR $1.4876, USD $1.3142. The fluctuation in exchange rates in the year ended October 31, 2019 resulted in an increase of $609 in backlog (October 31, 2018 – increase of $1,536).

The following chart summarizes Order Bookings:

	Years ended October 31	
	2019	2018
Opening Order Bookings backlog	$ 31,482	$ 25,996
New Order Bookings	13,495	16,905
Existing Order Bookings adjustments	(8,035)	-
Foreign exchange adjustment on opening Order Bookings backlog	609	1,536
Revenue	(15,197)	(12,955)
Closing Order Bookings backlog	$ 22,354	$ 31,482

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 Consolidated Statements of Financial Position in the form of cash, receivables, and payables. The average GBP/CAD exchange rate during the year ended October 31, 2019 was $1.6978, compared to an average of $1.7298 in 2018. The average EUR/CAD exchange rate during the year ended October 31, 2019 was $1.4963, compared to an average of $1.5290 in 2018. The average USD/CAD exchange rate during the year ended October 31, 2019 was $1.3303, compared to an average of $1.2870 in 2018. Foreign exchange loss for the year ended October 31, 2019 was $49 compared to a loss of $55 for the year ended October 31, 2018.

Adjusted EBITDA for the year ended October 31, 2019 was a loss of $6,060 compared to a loss of $3,210 for the year ended October 31, 2018. 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.

Selected Annual Information

(in thousands of dollars except per share amounts)	2019	2018	2017
Revenue	$ 15,197	$ 12,955	$ 12,833
Gross profit	2,178	4,385	4,215
Gross margin	14.3%	33.8%	32.8%
Impairment loss	-	10,885	26,886
Restructuring expense (recovery)	-	(2)	(99)
Adjusted EBITDA(1)	(6,060)	(3,210)	(4,387)
Adjusted EBITDA Margin(1)	(39.9%)	(24.8%)	(23.2%)
Loss from operations	(7,130)	(15,935)	(35,158)
Net loss	(8,483)	(16,223)	(33,834)
Basic and diluted loss per share	(0.39)	(0.75)	(1.57)
Total assets	22,418	15,624	31,148
Deferred revenue	3,499	2,412	2,252
Other current liabilities	5,042	5,250	4,843
Long-term loans and borrowings	10,089	498	662
Other non-current liabilities	1,669	257	388

(1) As defined in non-IFRS measures.

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 year ended October 31, 2019:

	Subscription Services	Data Products	Other Products & Services	Total Revenue
Government departments	$ 2,997	$ 27	$ 682	$ 3,706
Commercial and other	10,225	1,099	167	11,491
Total revenue	$ 13,222	$ 1,126	$ 849	$ 15,197

Revenues for the year ended October 31, 2018:

	Subscription Services	Data Products	Other Products & Services	Total Revenue
Government departments	$ 3,442	$ 326	$ 593	$ 4,361
Commercial and other	7,856	676	62	8,594
Total revenue	$ 11,298	$ 1,002	$ 655	$ 12,955

The Company's total revenue for the year ended October 31, 2019 was $15,197 compared to $12,955 for the year ended October 31, 2018. The Company anticipates that now that the commissioning of all exactView RT satellites on-board Iridium NEXT is complete, 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 revenue growth. Subscription Services revenue for the year ended October 31, 2019, was $13,222 compared to $11,298 for the year ended October 31, 2018. Subscription

Services revenue represented 87% of the Company's total revenue for the year ended October 31, 2019 compared to 87% for the year ended October 31, 2018. The $1,924 increase in Subscription Services revenue was primarily due to the addition of new subscription customers.

Revenue from Data Products was $1,126 for the year ended October 31, 2019, compared to $1,002 for the year ended October 31, 2018. This type of revenue is generated from on-demand customer requests and is therefore variable in its timing.

Revenue from Other Products & Services was $849 for the year ended October 31, 2019 compared to $655 for the year ended October 31, 2018. The type of revenue is generated from delivery of services related to ongoing percentage of completion projects and the sale of products related to small vessel opportunities and is therefore variable in its timing.

Revenue by quarter

	Subscription Services	Data Products	Other Products & Services	Total Revenue
Q1 2018	$ 2,461	$ 93	$ 282	$ 2,836
Q2 2018	$ 2,563	$ 585	$ 31	$ 3,179
Q3 2018	$ 3,001	$ 56	$ 114	$ 3,171
Q4 2018	$ 3,273	$ 268	$ 228	$ 3,769
Q1 2019	$ 3,118	$ 99	$ 305	$ 3,522
Q2 2019	$ 3,181	$ 339	$ 386	$ 3,906
Q3 2019	$ 3,466	$ 449	$ 96	$ 4,011
Q4 2019	$ 3,457	$ 239	$ 62	$ 3,758

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

	Years ended October 31	
	2019	2018
Gross profit	$ 2,178	$ 4,385
Gross margin	14.3%	33.8%

Gross margin for the year ended October 31, 2019 was 14.3% compared to 33.8% for the year ended October 31, 2018. Gross margin decreased in the year ended October 31, 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 $1,363 of SIF operating grant recognized against cost of revenue in the year ended October 31, 2019 (October 31, 2018 – $1,154). 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. With the Second-Generation constellation now completed and with L3Harris having declared IOC, the Company's cost of revenue has experienced a significant increase in recent quarters. However, with an expected quarterly reduction in cost of revenue as a result of the A&R L3Harris Agreement of approximately $800, and as the Company works to leverage its service advantage with exactView RT and as its customer base subsequently grows, the Company expects a higher gross margin over the long term.

SG&A expenses

SG&A expenses for the year ended October 31, 2019 were $7,709 compared to $6,345 for the year ended October 31, 2018. The $1,364 increase in the year ended October 31, 2019 was primarily due to an increase in bad debt expense of $525. In addition, there were increases in legal fees, management incentive compensation and long-term incentive plan expense, partially offset by reductions in consulting fees and travel expense.

During the year ended October 31, 2019, the bad debt expense was $215 and is based on uncollectible balances written off during the year and expected credit loss on outstanding accounts receivable. This compared to a bad debt recovery of $310 in the year ended October 31, 2018 due to reversals of allowances for bad debts.

Product development and R&D expenses

Product development and R&D expenses for the year ended October 31, 2019 were $840 compared to $1,391 for the year ended October 31, 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.

The recoverable amount used in the impairment test at October 31, 2019 was based on fair value less cost to sell using a market approach to determine the Company's market capitalization. The market capitalization at October 31, 2019 of $5,647 exceeded the carrying value of the Company's shareholders' equity of $2,119; therefore, no impairment was recognized at October 31, 2019 (October 31, 2018 – Property, plant & equipment $7,617 and intangible assets $3,268). For additional information, refer to note 8 (Impairment of long-lived assets).

Other and income tax expenses

	Years ended October 31		
	2019	2018	Change
Other expense	$ -	$ 49	$ (49)
Restructuring recovery	-	(2)	2
Foreign exchange loss	49	55	(6)
Interest income	(224)	(38)	(186)
Interest expense	1,407	72	1,335
Income tax expense	121	152	(31)
Total other and income tax expenses	$ 1,353	$ 288	$ 1,065

Restructuring 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 $2 recovery in the year ended October 31, 2018 relates to the revaluation of RSUs and adjustments to benefits payable.

Foreign exchange loss

Foreign exchange amounts in the Consolidated Statements of Comprehensive Loss include realized and unrealized gains and losses that result from translation of foreign denominated balances in the Company's Consolidated Statements of Financial Position. The impact of translation of outstanding foreign denominated balances in the Consolidated Statements of Financial Position and of settling foreign denominated balances into cash during the year ended October 31, 2019 was a loss of $49 compared to a loss of $55 during the year ended October 31, 2018.

Interest income

The Company's interest income for the year ended October 31, 2019 was $224 compared to $38 for the year ended October 31, 2018. Interest income increased due to higher cash balances.

Interest expense

The Company's interest expense for the year ended October 31, 2019 was $1,407 compared to $72 for the year ended October 31, 2018. Interest expense is increased due to the addition of the SIF funding and the convertible debenture financing, the majority of which is long term. For additional information, refer to note 4 (Government assistance) and note 9 (Loans payable, financial instruments and foreign exchange) in the Notes to the Consolidated Financial Statements.

Income tax expense

The Company's income tax expense for the year ended October 31, 2019 was $121 compared to $152 for the year ended October 31, 2018. Income tax expense relates to withholding tax that is not expected to be recoverable.

Adjusted EBITDA

	Years ended October 31	
	2019	2018
Net loss	$ (8,483)	$ (16,223)
Interest income	(224)	(38)
Interest expense	1,407	72
Income tax expense	121	152
Depreciation and amortization	759	1,699
Unrealized foreign exchange gain	(59)	(53)
Share-based compensation	419	298
Impairment losses	-	10,885
Restructuring recovery	-	(2)
Adjusted EBITDA	$ (6,060)	$ (3,210)

Adjusted EBITDA for the year ended October 31, 2019, was a loss of $6,060 compared to a loss of $3,210 for the year ended October 31, 2018. The decrease in Adjusted EBITDA for the year ended October 31, 2019 was driven primarily by higher cost of revenue and SG&A expenses, partially offset by higher revenue and lower product development and R&D expense. 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 $8,483 or $0.39 per basic and diluted share, for the year ended October 31, 2019, compared to net loss of $16,223 or $0.75 per basic and diluted share, for the year ended October 31, 2018. The net loss decreased primarily due to higher revenue and decreases in product development and R&D expense, depreciation and amortization and impairment losses, partially offset by increases in cost of revenue, SG&A and interest expense.

Net loss by quarter

	Net loss	Loss per share
Q1 2018	$ (1,599)	$ (0.07)
Q2 2018	$ (2,049)	$ (0.09)
Q3 2018	$ (2,253)	$ (0.10)
Q4 2018	$ (10,322)	$ (0.48)
Q1 2019	$ (1,235)	$ (0.06)
Q2 2019	$ (2,155)	$ (0.10)
Q3 2019	$ (2,877)	$ (0.13)
Q4 2019	$ (2,216)	$ (0.10)

Fourth Quarter Review

Revenues for the three months ended October 31, 2019:

	Subscription Services	Data Products	Other Products & Services	Total Revenue
Government departments	$ 775	$ -	$ 1	$ 776
Commercial and other	2,682	239	61	2,982
Total revenue	$ 3,457	$ 239	$ 62	$ 3,758

Revenues for the three months ended October 31, 2018:

	Subscription Services	Data Products	Other Products & Services	Total Revenue
Government departments	$ 818	$ 4	$ 221	$ 1,043
Commercial and other	2,455	264	7	2,726
Total revenue	$ 3,273	$ 268	$ 228	$ 3,769

Revenue for Q4 2019 was $3,758 with a cost of revenue of $3,767 resulting in a negative gross profit of $9. The corresponding results for Q4 2018 were revenue of $3,769, cost of revenue of $1,470 and a gross profit of $2,299. Gross margin for the Q4 2019 was negative 0.2% compared to 61.0% for the Q4 2018. Gross margin decreased for Q4 2019 compared to the Q4 2018 due to an increase in cost of revenue, partially offset by an increase in revenue. Cost of revenue increased primarily due to higher satellite operating costs related to the Second-Generation Constellation, increased terrestrial data costs and $1,154 of SIF funding recognized against cost of revenue in Q4 2018 compared to $227 of SIF funding recognized in Q4 2019.

Adjusted EBITDA

	Three months ended October 31	
	2019	2018
Net loss	$ (2,216)	$ (10,322)
Interest income	(70)	(5)
Interest expense	417	14
Income tax expense	5	30
Depreciation and amortization	194	451
Unrealized foreign exchange (gain) loss	(202)	72
Share-based compensation	20	(168)
Impairment Loss	-	10,885
Adjusted EBITDA	$ (1,852)	$ 957

Adjusted EBITDA for the three months ended October 31, 2019, was a loss of $1,852 compared to a gain of $957 for the three months ended October 31, 2018. The decrease year over year was driven by increased cost of revenue and SG&A, partially offset by increased revenue and decreased product development and R&D. 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.

Operating expenses for Q4 2019 decreased compared to Q4 2018. Impairment losses of nil in Q4 2019 compared to $10,885 recognized in Q4 2018 was the primary driver of the decrease in operating loss from $10,210 in Q4 2018 to $2,035 in Q4 2019.

The net loss for Q4 2019 was $2,216 while Q4 2018 reported a net loss of $10,322. The net loss in the quarter was reduced primarily due to higher revenue and lower, operating expenses, including impairment, and a foreign exchange gain versus a loss in Q4 2018, partially offset by higher cost of revenue and SG&A.

Financial position

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

	Increase / (Decrease)	Explanation
Cash	$ 5,414	The increase in cash is due to collections and net proceeds from the SIF funding and convertible debenture financing, partially offset by ongoing operational expenses.
Accounts receivable	$ (418)	The accounts receivable balance fluctuates with changes in billings and collections.
Unbilled revenue	$ 1,238	The unbilled revenue reflects the amount of revenue recognized in advance of billings.
Prepaid expenses	$ 141	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)	$ 212	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.

	Increase / (Decrease)		Explanation
Property, plant and equipment	$	389	The increase in property, plant and equipment is due to additions of $1,183, offset by SIF funding of $136, reimbursement from LuxSpace for services related to EV-10 of $91 and depreciation of $567.
Intangible assets	$	(182)	The decrease in intangible assets is due to amortization of $192, offset by additions of $10.
Accounts payable and accrued liabilities (current and non-current)	$	1,429	The balance fluctuates based on timing of goods and services received and payments, and includes the accrual of certain payables to Harris under the Harris Agreement, convertible debenture interest payable and contract liabilities.
Deferred revenue	$	1,087	Deferred revenue reflects billings that occur in advance of revenue recognition.
Loans payable (current and non-current)	$	9,334	The increase is due to the convertible debenture financing and the SIF loan, partially offset by principal payments made on the FED DEV loan.
Long-term incentive plan liability (current and non-current)	$	32	The increase is due to the continuing accrual of deferred share units payable and revaluation of previously accrued units due to an increase in stock price, partially offset by the settlement of deferred share units.
Share capital	$	29	The increase is due to the issuance of shares related to the employee share purchase plan and settlement of RSUs.
Contributed surplus	$	3,196	The increase is related to the convertible debenture financing, net of fair value of the liability, and expense recognized on RSUs and stock options during the year ended October 31, 2019. Stock options and RSUs will be equity settled.
Accumulated other comprehensive loss	$	(102)	The decrease is due to the foreign exchange translation of the Company's subsidiary.
Deficit	$	(8,211)	The decrease represents net loss of $8,483, 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:

	October 31, 2019		October 31, 2018		% Change
Cash	$	10,188	$	4,774	113%
Short-term investments	$	49	$	49	-
Accounts receivable	$	3,073	$	3,491	(12%)
Prepaid expenses	$	448	$	307	46%
Other assets – current	$	209		347	(40%)
Accounts payable and accrued liabilities	$	4,840	$	4,782	1%
Loans payable – current	$	202	$	459	(56%)

Working capital

Working capital increased $5,358 during the year ended October 31, 2019 to $7,575. The increase since October 31, 2018 is driven by the following:

	Increase / (Decrease) to working capital
Increase in cash	$ 5,414
Decrease in accounts receivable	(418)
Increase in unbilled revenue	1,238
Increase in prepaid expenses	141
Decrease in other assets	(138)
Increase in accounts payable and accrued liabilities	(58)
Increase in deferred revenue	(1,087)
All other	266
Total	$ 5,358

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:

	Years ended October 31	
	2019	2018
Cash used in operating activities	$ (6,305)	$ (3,038)
Cash used in investing activities	(853)	(1,168)
Cash from financing activities	12,624	698
Effect of exchange rate changes on cash	(52)	165
Net increase (decrease) in cash	$ 5,414	$ (3,343)
Cash, beginning of the year	4,774	8,117
Cash, end of the year	$ 10,188	$ 4,774

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. 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 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 2020. For additional information, refer to note 4 (Government assistance) and note 9 (Loans payable, financial instruments and foreign exchange) in the Notes to the 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 Consolidated Financial Statements.

Operating activities

Cash flows used in operations for the year ended October 31, 2019 were $6,305, compared to cash flows used in operations of $3,038 for the year ended October 31, 2018. The change in cash flows used in operations was primarily due to working capital changes and payment of outstanding invoices related to the L3Harris agreement.

Investing activities

Cash flows used in investing activities for the year ended October 31, 2019 were $853 compared to cash flows used in investing activities of $1,168 for the year ended October 31, 2018. Investing activity cash flows in 2019 include the acquisition of long-lived assets, offset by reimbursement from LuxSpace related to EV-10.

Financing activities

Cash flows from financing activities in the year ended October 31, 2019 were $12,624, compared to $698 from financing in the year ended October 31, 2018. Financing activity cash flows in 2019 were related to the convertible debenture and SIF loan advances, offset by issue costs and repayment of the government loan.

Contractual obligations

The following table outlines the contractual cash obligations (excluding accounts payable and accrued liabilities) as at October 31, 2019:

	Total	Less than one year	2-3 years	4-5 years	>5 years
Loans and interest payable	$ 21,998	$ 595	$ 455	$ 696	$ 20,252
Lease obligations	250	110	140	-	-
Capital commitments	3,337	369	1,669	1,299	-
L3Harris commitment	46,581	3,951	7,901	7,901	26,828
Hisdesat commitment	2,180	240	480	480	980
Total contractual obligations	$ 74,346	$ 5,265	$ 10,645	$ 10,376	$ 48,060

As at October 31, 2019, the Company had various contractual cash obligations, including loans payable, capital commitments and commitments and obligations under the L3Harris Agreement. For additional information, refer to note 4 (Government assistance) and note 12 (Commitments and contingencies) in the Notes to the Consolidated Financial Statements. In January 2020, the A&R L3Harris Agreement was announced. For additional information, refer to note 19 (Subsequent events) in the Notes to the 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 October 31, 2019, the Company does not have any off-balance sheet arrangements, other than operating leases as disclosed in note 12 (Commitments and contingencies) in the Notes to the Consolidated Financial Statements.

Proposed transactions

The Company did not have any proposed transactions as at October 31, 2019.

FINANCIAL INSTRUMENTS

We are exposed, through our operations, to foreign currency risk, credit risk, liquidity risk, interest rate risk and fair value risk. The overall objective of the Board is to set policies that seek to reduce risk as far as possible without unduly affecting the Company's competitiveness and flexibility.

Foreign Currency Risk

Foreign currency risk is the risk that a variation in exchange rates between the CAD and USD or other foreign currencies will affect our operations and financial results.

The majority of our revenue is transacted in USD, and portions of the revenue are denominated in GBP and EUR. Purchases, consisting primarily of the majority of salaries, certain operating costs, and manufacturing overhead, are incurred primarily in CAD. Our foreign operations are conducted through our Subsidiary. The assets and liabilities of the foreign operations are translated into CAD using the exchange rates in effect at the dates of the consolidated statements of financial position. Foreign currency risks arising from translation of assets and liabilities of foreign operations into our functional currency are generally not hedged. Fluctuations in foreign exchange rates could result in unanticipated fluctuations in our operating results. We have transactions that are denominated in GBP, EUR and USD but do not have exposure to any highly inflationary foreign currencies.

Based on our net exposure on our outstanding foreign currency denominated monetary assets and liabilities at October 31, 2019, a 10% weakening in the CAD in relation to the GBP would have decreased the Company's net loss in the year ended October 31, 2019 by approximately $103. Based on our net exposure at October 31, 2019, a 10% weakening in the CAD in relation to the EUR would have decreased the Company's net loss for the year ended October 31, 2019 by approximately $151. A 10% weakening in the CAD in relation to the USD would have decreased the Company's net loss for the year ended October 31, 2019 by approximately $309. A 10% strengthening in the CAD in relation to these currencies would have had the opposite effect.

Credit Risk

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations. Financial instruments that are potentially subject to credit risk consist primarily of cash and trade and other receivables.

We attempt to mitigate our credit risk by dealing only with large financial institutions with good credit ratings. All of the financial institutions that we transact with meet these qualifications; however, there can be no guarantee as to the solvency or reliability of such counterparties. Cash is maintained with financial institutions of reputable credit and may be redeemed upon demand.

Credit risk also arises from the inability of customers to discharge their obligation to us. If one or more customers were to delay, reduce or cancel Order Bookings, our overall Order Bookings may fluctuate and could adversely affect our operations and financial conditions. In the normal course of business, we monitor the financial condition of our customers and review the credit history of each new customer.

The Company has policies to limit the amount of risk with each individual customer, and exposure to bad debts is managed as part of the Company's normal activities. Each customer's credit rating is assessed considering its financial position, past experience and other factors. Credit limits are regularly monitored, and the Company has formal procedures for detecting objective evidence of impairment of trade receivables. Based on a review of trade accounts receivable, an allowance for doubtful accounts of $64 was recorded at October 31, 2019 (October 31, 2018 – $5). The maximum exposure relating to trade and other receivables at October 31, 2019 was $3,073 (October 31, 2018 – $3,491).

Liquidity Risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they become due. We monitor our risk to a shortage of funds using a rolling twelve-month cash flow forecast. This forecast considers the maturity of our financial assets (e.g., accounts receivable, other financial assets), liabilities (e.g., payables, loans), and projected cash flows from operations. Our policy is to ensure adequate funding is available from operations, established lending facilities and other sources as required. An inability to properly manage our liquidity risk could have a material adverse effect on our results of operations, business prospects and financial condition.

To date, the Company has a history of operating losses (year ended October 31, 2019 – $8,483, year ended October 31, 2018 – $16,223, year ended October 31, 2017 – $33,834) and generating insufficient cash flows from operations to fund its activities (year ended October 31, 2019 – outflows of $6,305, year ended October 31, 2018 – outflows of $3,038, year ended October 31, 2017 – outflows of $7,707).

Interest Rate Risk

Our risk exposure to market interest rates relates primarily to new financing that we may undertake. Our policy will be to review our borrowing requirements on a continual basis and to enter into fixed or variable interest rate borrowing arrangements as required.

Fair Value Risk

Fair values have been determined for measurement and/or disclosure purposes. When applicable, further information about the assumptions made in determining fair values is disclosed in the Financial Statement notes specific to that asset or liability.

Summary of Significant Accounting Policies

Critical accounting estimates

The preparation of the Company's 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 Consolidated Financial Statements.

Revenue recognition

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 contracts 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 the estimated 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 subscription services such as data subscriptions and software as a service. Customers simultaneously receive and consume subscription services; therefore, performance obligations are satisfied over time. Revenue is recognized upon delivery for data products such as archive data and custom reports, which are performance obligations satisfied at a point in time upon transfer of control. Other products and services include percentage of completion projects and sales of Class B transponders, which are recognized either as satisfied over time or at a point in time, depending on the nature of the 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, Class B transponders and other data products. 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. 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 gave rise to the change occur. 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 contact or an anticipated contract and generate or enhance the Company's resources that will be used in satisfying the performance obligations in the future.

Deferred contract costs for the Company consist of sales commissions related directly to a contract.

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 estimated SSP. 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 inputs from the Company's pricing team, including historical SSP.

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.

Revenue on fixed price contracts with performance obligations satisfied over time is recognized on a percentage of completion basis. In applying the accounting policy to fixed price contracts, judgment is required in determining the estimated costs to complete a contract. These cost estimates are reviewed as at each reporting period and by their nature may give rise to income volatility. To estimate income (loss) on completion, the Company takes into account factors inherent to the contract by using historical and/or forecast data. When total contract costs are likely to exceed total contract revenue, the expected loss is recognized immediately and recorded in accounts payable and accrued liabilities in the Consolidated Statements of Financial Position. The accrual is drawn down over the completion of the contract using the percentage of completion method.

Allowance for doubtful accounts

The Company establishes an allowance for doubtful accounts using the simplified ECL model. The Company ECL model uses a provision matrix to apply historical loss rates to outstanding receivable balances. Judgement is required in determining the grouping of receivables based on shared credit risk characteristics as well as determining historical loss rates which are reflective of future economic conditions.

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.

Financial instruments

Financial assets and liabilities are recognized when the Company becomes a party to the contractual provisions of the instrument. Financial assets are derecognized when the rights to receive the cash flows from the assets have expired or have been transferred and the Company has transferred substantially all risks and rewards of ownership. Financial assets and liabilities are offset, and the net amount is reported in the Consolidated Statements of Financial Position when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the asset and settle the liability simultaneously.

Trade receivables

Trade receivables are amounts due from customers for goods sold or services performed in the ordinary course of business. These are classified in current assets, except for the portion expected to be realized or paid beyond twelve months of the Consolidated Statements of Financial Position date, if any, which are classified as non-current. Trade receivables are recognized initially at the amount of consideration that is unconditional, unless they contain significant financing components, when they are recognized at fair value. The Company holds trade receivables with the objective of collecting contractual cash flows and therefore measures them subsequently at amortized cost using the effective interest method.

Due to the short-term nature of current receivables, their carrying amount is considered to be the same as their fair value.

Accounts payable and other liabilities

Accounts payable are unsecured and are usually paid within 30 to 60 days of recognition. The carrying amounts of accounts payable are considered to be the same as their fair values, due to their short-term nature. Accounts payable and accrued liabilities also includes, provisions, and other payables. Accounts payable and accrued liabilities are recognized at the amount required to be paid, less, when material, a discount to reduce accounts payable to fair value. Subsequently, accounts payable and accrued liabilities are measured at amortized cost using the effective interest rate method. Financial liabilities are classified as current liabilities if payment is due within twelve months. Otherwise, they are presented as non-current liabilities.

The Company is not party to any derivative financial instruments.

Impairment of financial assets

At each reporting date, the Company assesses whether there is objective evidence that a financial asset is impaired. Objective evidence that financial assets are impaired can include default or delinquency by a debtor, restructuring or an amount due to the Company on terms that the Company would not otherwise consider, or indications that a debtor or issuer will enter bankruptcy.

The Company applies the IFRS 9 simplified approach to measuring expected credit losses, which uses a lifetime expected loss allowance for all trade receivables and contract assets. To measure the expected credit losses, trade receivables, unbilled receivables, and other assets, have been grouped based on shared credit risk characteristics and the days past due.

The expected loss rates are based on payment profiles of sales over prior periods and the corresponding historical credit losses experienced during this period. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle receivables.

Impairment losses on financial assets are measured at amortized cost and are calculated as the difference between the carrying amount and the present value of the estimated future cash flows discounted at the asset's original effective interest rate. Losses are recognized in profit or loss and recorded as expected credit loss against receivables. When a subsequent event causes the impairment loss to decrease, the decrease is reversed through profit or loss.

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 year ended October 31, 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 2, Share-based Payments

In June 2016, the IASB issued final amendments to IFRS 2, which clarifies how to account for certain types of share-based payment transactions. The amendments provide requirements on the accounting for: (i) the effect of vesting and non-vesting conditions on the measurement of cash-settled share-based payments; (ii) share-based payment transactions with a net settlement feature for withholding tax obligations; and (iii) a modification to the terms and conditions of a share-based payment that changes the classifications of the transaction from cash-settled to equity-settled. The amendments are effective for annual periods beginning on or after January 1, 2018, with early adoption permitted. There were no adjustments related to the amendments to IFRS 2 in the 2019 Consolidated Financial Statements.

IFRS 9, *Financial instruments*

Effective November 1, 2018, the Company has adopted IFRS 9 *Financial Instruments* ("**IFRS 9**") in its 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 ECL 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, 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 expected credit loss ("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-month 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 accounts receivable the Company applies the simplified provision matrix approach permitted by IFRS 9, which requires lifetime ECLs to be recognized from initial recognition.

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.

IFRS 15, *Revenue from contracts with customers*

Effective November 1, 2018, the Company adopted IFRS 15 *Revenue from Contracts with Customers* ("**IFRS 15**") using the modified retrospective approach. 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.

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 Consolidated Statements of Financial Position and amortized over the period of expected benefit using the estimated customer retention period, 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 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 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 does not result in a new distinct performance obligation, the transaction price is updated as well as the measure of progress and results in 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.

International Financial Reporting Interpretations Committee ("IFRIC") 22, Foreign Currency Transactions and Advance Consideration ("IFRIC 22")

IFRIC 22 clarifies the appropriate exchange rate to use on initial recognition of an asset, expense or income when advance consideration is paid or received in a foreign currency. The new interpretation was effective for annual periods beginning on or after January 1, 2018. There were no adjustments related to the adoption of IFRIC 22 in the 2019 Consolidated Financial Statements.

For additional information, refer to note 3 (Changes to accounting policies and future accounting changes) in the Notes to the 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, Leases is a new standard effective for fiscal years beginning on or after January1, 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 using the modified retrospective approach and as a result the comparative information will not be restated and will continue to be reported under IAS 17 and IFRIC 4.

The extent of the impact on the Consolidated Financial Statements of adoption of the standard has not yet been determined. However, based on the review completed to date, the Company believes that on adoption of IFRS 16 there will be no impact on revenue but 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 and an increase to depreciation expense and finance costs, offset by lower operating lease expenses. Additionally, an increase in cash flow from operating activities is also expected as lease payments will be recorded as financing outflows in the Consolidated Statement of Cash Flows.

The lease liability will be measured at the present value of the future lease payments at the date of adoption. A valuation approach to discount the population of leases has been developed and the Company is in the final stages of assessing the methodology, the deemed commencement date for calculation of the right-of-use assets and the incremental borrowing rate to be applied.

In general, the right-of-use asset will be depreciated using the straight-line method from the date of adoption to the end of the lease term. Interest on the lease liability will be calculated using the effective interest method with rent payments reducing the liability.

The quantitative impact of adopting IFRS 16 will be provided in the Company's Q1 2020 Interim Condensed Consolidated Financial Statements. The Company is currently in the process of upgrading its existing systems, processes and internal controls to account for IFRS 16.

IFRIC 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 October 31, 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 21,703,415 as of the date of this MD&A.

Independent auditor's report

To the Shareholders of
exactEarth™ Ltd.

Opinion

We have audited the consolidated financial statements of **exactEarth™ Ltd.** and its subsidiaries [the "Group"], which comprise the consolidated statements of financial position as at October 31, 2019 and 2018, and the consolidated statements of loss and comprehensive loss, consolidated statements of changes in shareholders' equity and consolidated statements of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at October 31, 2019 and 2018, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards ["IFRS"].

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other information

Management is responsible for the other information. The other information comprises:

- Management's Discussion and Analysis.
- Annual Information Form

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information, and in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.
We obtained Management's Discussion and Analysis prior to the date of this auditor's report. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact in this auditor's report. We have nothing to report in this regard.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRSs, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

The engagement partner on the audit resulting in this independent auditor's report is Blaine Hertzberger.

Ernst & Young LLP

Chartered Professional Accountants
Licensed Public Accountants

Waterloo, Canada
January 28, 2020

exactEarth™ Ltd.
Consolidated Statements of Financial Position
(in thousands of Canadian dollars)

		As at October 31, 2019	As at October 31, 2018
		$	$
ASSETS			
Current assets			
Cash and cash equivalents		10,188	4,774
Short-term investments	(note 9)	49	49
Accounts receivable	(notes 9, 15 and 16)	3,073	3,491
Unbilled revenue	(note 16)	2,149	911
Prepaid expenses		448	307
Other assets	(notes 3 and 16)	209	347
Total current assets		16,116	9,879
Property, plant and equipment	(notes 6, 8 and 17)	4,398	4,009
Intangible assets	(notes 7, 8 and 17)	1,538	1,720
Other long-term assets	(notes 3 and 16)	366	16
Total assets		22,418	15,624
LIABILITIES & SHAREHOLDERS' EQUITY			
Current liabilities			
Accounts payable and accrued liabilities	(notes 9, 15 and 16)	4,840	4,782
Deferred revenue	(note 3 and 16)	3,499	2,412
Loans payable - current	(note 9 and 15)	202	459
Long-term incentive plan liability - current	(note 11)	-	9
Total current liabilities		8,541	7,662
Loans payable	(notes 4, 9 and 15)	10,089	498
Long-term incentive plan liability	(note 9 and 11)	203	162
Other long-term liabilities	(notes 3, 15 and 16)	1,466	95
Total liabilities		20,299	8,417
Shareholders' equity			
Share capital	(note 11)	123,823	123,794
Contributed surplus	(note 11)	4,647	1,451
Accumulated other comprehensive loss		(113)	(11)
Deficit	(note 3)	(126,238)	(118,027)
Total shareholders' equity		2,119	7,207
Total liabilities and shareholders' equity		22,418	15,624

See accompanying notes

On behalf of the Board:

Harvey Rein - Director - exactEarth™ Ltd.
Peter Mabson - Director - exactEarth™ Ltd.

exactEarth™ Ltd.
Consolidated Statements of Changes in Shareholders' Equity
(in thousands of Canadian dollars)

For the year ended October 31, 2019		**Total**	**Deficit**	**Accumulated Other Comprehensive Loss**	**Share Capital**	**Contributed Surplus**
		$	**$**	**$**	**$**	**$**
Balance at October 31, 2018		7,207	(118,027)	(11)	123,794	1,451
Impact of change in accounting policy	(note 3)	272	272	-	-	-
Adjusted balance at October 31, 2018		7,479	(117,755)	(11)	123,794	1,451
Stock-based compensation expense	(note 11)	96	-	-	-	96
Restricted share unit expense	(note 11)	212	-	-	-	212
Convertible debentures	(note 9)	2,917	-	-	-	2,917
Issuance of common shares	(note 11)	-	-	-	29	(29)
Comprehensive loss		(8,585)	(8,483)	(102)	-	-
Balance at October 31, 2019		2,119	(126,238)	(113)	123,823	4,647

For the year ended October 31, 2018						
Balance at October 31, 2017		23,003	(101,804)	(44)	123,781	1,070
Stock-based compensation expense	(note 11)	255	-	-	-	255
Transfer RSUs to contributed surplus	(note 11)	139			-	139
Issuance of common shares	(note 11)	-	-	-	13	(13)
Comprehensive (loss) income		(16,190)	(16,223)	33	-	-
Balance at October 31, 2018		7,207	(118,027)	(11)	123,794	1,451

See accompanying notes

exactEarth™ Ltd.
Consolidated Statements of Loss and Comprehensive Loss
(in thousands of Canadian dollars except for per share figures)

		Year ended October 31, 2019	October 31, 2018
		$	$
Revenue	(notes 16 and 17)	15,197	12,955
Cost of revenue	(note 4 and 14)	13,019	8,570
Gross profit		2,178	4,385
Selling, general and administrative	(note 14)	7,709	6,345
Product development and research and development	(note 14)	840	1,391
Depreciation and amortization	(notes 6 and 7)	759	1,699
Impairment loss	(note 8)	-	10,885
Loss from operations		(7,130)	(15,935)
Other expenses			
Other expense		-	49
Restructuring recovery		-	(2)
Foreign exchange loss		49	55
Interest income		(224)	(38)
Interest expense	(notes 4 and 9)	1,407	72
Total other expenses		1,232	136
Income tax expense	(note 13)	121	152
Net loss	(note 3)	(8,483)	(16,223)
Other comprehensive (loss) income			
Item that may be subsequently reclassified to net loss:			
Foreign currency translation, net of income tax expense of nil		(102)	33
Total other comprehensive (loss) income		(102)	33
Comprehensive loss		(8,585)	(16,190)
Loss per share			
Basic and diluted loss per share	(note 3 and 11)	(0.39)	(0.75)

See accompanying notes

exactEarth™ Ltd.
Consolidated Statements of Cash Flows
(in thousands of Canadian dollars)

		Year ended October 31, 2019	Year ended October 31, 2018
		$	$
Operating activities			
Net loss		(8,483)	(16,223)
Add (deduct) items not involving cash			
Non-cash interest	(notes 4 and 9)	354	72
Depreciation and amortization	(notes 6 and 7)	759	1,699
Impairment loss	(note 8)	-	10,885
Operating grant recognized on SIF loan	(note 4)	(1,363)	(1,154)
Technology demonstration program recovery	(note 4)	-	(202)
Long-term incentive plan expense	(note 11)	323	43
Stock-based compensation	(note 11)	96	255
Restructuring reserve - revaluation		-	(2)
Net change in non-cash working capital balances		2,046	1,806
Other operating cash flows			
Technology demonstration program funding received	(note 4)	26	407
Settlement of share units	(note 11)	(63)	(238)
Restructuring provision - payment of salary continuance		-	(386)
Cash flows used in operations		(6,305)	(3,038)
Investing activities			
Acquisition of property, plant and equipment	(note 6)	(1,190)	(1,455)
Reimbursement of acquisition costs of property, plant and equipment	(note 6)	347	315
Acquisition of intangible assets	(note 7)	(10)	(28)
Cash flows used in investing activities		(853)	(1,168)
Financing activities			
Government loan repayment	(notes 4 and 9)	(452)	(533)
Government loan advance	(notes 4 and 9)	1,222	1,425
Long-term debt repayment	(note 9)	-	(145)
Convertible debenture advance	(note 9)	13,000	-
Convertible debenture issue costs	(note 9)	(1,146)	(49)
Cash flows from financing activities		12,624	698
Effect of exchange rate changes on cash		(52)	165
Net increase (decrease) in cash		5,414	(3,343)
Cash, beginning of the year		4,774	8,117
Cash, end of the year		10,188	4,774
Supplemental cash flow information			
Interest paid		195	-
Interest received		185	38
Income taxes paid		121	152

See accompanying notes

1. DESCRIPTION OF THE BUSINESS

Founded in 2009, exactEarth™ Ltd. (the "**Company**" or "**exactEarth**") is a provider of space-based maritime tracking data from its satellites. exactEarth leverages advanced microsatellite technology to deliver monitoring solutions. The Company is incorporated under the *Canada Business Corporations Act* and its shares are listed on the Toronto Stock Exchange. The Company's head office is located at 260 Holiday Inn Drive, Cambridge, Ontario, Canada. The Company became a publicly traded company on February 9, 2016 through a spin-out transaction from Com Dev International Ltd. (the "**Spinout Transaction**").

2. SIGNIFICANT ACCOUNTING POLICIES

a) Statement of compliance

These Consolidated Financial Statements present the Company's results of operations and financial position as at and for the year ended October 31, 2019, including the comparative period, under International Financial Reporting Standards ("**IFRS**") as issued by the International Accounting Standards Board ("**IASB**").

These Consolidated Financial Statements were authorized for issuance by the Board of Directors of the Company on January 28, 2020.

b) Basis of presentation

These Consolidated Financial Statements include the accounts of the Company and its subsidiary with intercompany transactions and balances eliminated. The Company has two divisions, one in Cambridge, Ontario, Canada, and one in Harwell, United Kingdom.

These Consolidated Financial Statements are presented in Canadian dollars ("**CAD**") and have been prepared on a historical cost basis.

The Company has experienced lower than planned revenue combined with operating losses resulting in a reduction of ongoing operating cash flows. Management has assessed and concluded that there are no material uncertainties related to events or conditions that may cast significant doubt upon the Company's ability to continue as a going concern. Management applied significant judgment in arriving at this conclusion including:

- The amount of new sales orders and total revenue to be generated to provide sufficient cash flows to continue to fund operations and other committed expenditures;
- The timing of generating those new sales and the timing of the related cash flows;
- The assessment of potentially discretionary expenditures that could be delayed in order to manage cash flows.

Given the judgement involved, actual results may lead to a materially different outcome.

c) Short-term investments

Short-term investments consist of investments that mature greater than 90 days from the date of acquisition. Short-term investments are carried at their fair values.

d) Property, plant and equipment

Property, plant and equipment ("**PP&E**") are stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such cost includes the cost of replacing component parts of the PP&E and borrowing costs for eligible long-term construction projects. When significant parts of an item of PP&E are required to be replaced at intervals, the Company derecognizes the replaced part and recognizes the new part with its own associated useful life and depreciation. Likewise, when a major inspection is performed, its cost is recognized in the carrying amount of the PP&E as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognized in the Consolidated Statements of Loss and Comprehensive Loss as incurred.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets as follows:

Leasehold improvements	Lease term
Satellites	Ten years
Electrical equipment	Ten years
Computer hardware	Three to five years
Furniture and fixtures	Three to five years

An item of PP&E and any significant part initially recognized are derecognized upon disposal or when no future economic benefits are expected from their use or eventual disposition. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the Consolidated Statements of Loss and Comprehensive Loss when the asset is derecognized.

The assets' residual values, useful lives and methods of depreciation are reviewed at each financial year-end and adjusted prospectively, if appropriate.

e) Intangible assets

Finite-life intangible assets are valued at cost less accumulated amortization and accumulated impairment losses, if any, and which is provided at rates sufficient to write off the costs over the estimated useful lives of the assets, using the straight-line method as follows:

Computer software not integral to the hardware on which it operates	Three to ten years
Internally developed technology	Five to seven years
Data rights	Ten years
Technology licences	Seven years

Intangible assets with finite lives are assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least as at the end of each reporting period. Changes in the expected useful life, or the expected pattern of consumption of future economic benefits embodied in the asset, are accounted for by changing the amortization period or method, as appropriate, and are treated prospectively as a change in accounting estimate. The amortization expense on intangible assets with finite lives is recognized in the Consolidated Statements of Loss and Comprehensive Loss in depreciation and amortization expense.

Gains or losses arising from derecognition of an intangible asset are measured as the difference between the net disposal proceeds and the carrying amount of the asset and are recognized in the Consolidated Statements of Loss and Comprehensive Loss when the asset is derecognized.

Costs that are directly attributable to the development and testing of identifiable and unique internally developed technology controlled by the Company are recognized as intangible assets when the criteria specified in International Accounting Standards ("**IAS**") 38, *Intangible Assets* ("**IAS 38**") are met. Capitalized costs include employee costs for staff directly involved in technology development and other expenditures directly related to the project.

Research and development expenditures

Research costs are expensed as incurred. Development expenditures on an individual project, are recognized as an intangible asset only when they have met the conditions of IAS 38. Investment tax credits ("**ITCs**") reduce research and development expense and/or intangible assets in the same period in which the related expenditures are charged to income or capitalized provided there is reasonable assurance the benefit will be realized. Otherwise, the incentives are recorded when the benefit is expected to be realized.

Following initial recognition of the development expenditure as an asset, the cost model is applied requiring the asset to be carried at cost less any accumulated amortization and accumulated impairment losses. Amortization begins when development is complete, and the asset is available for use. It is amortized over the period of expected future benefit. During the period of development, the asset is tested for impairment annually.

Research and development costs that are funded by the Company are presented separately on the Consolidated Statements of Loss and Comprehensive Loss. Government grants, ITCs, and other funding for research activity are presented as a reduction of the related expense or intangible asset.

f) Impairment of long-lived assets

The Company assesses as at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Company estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's fair value less costs to sell ("**FVLCS**") and its value in use ("**VIU**"), and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets in which case the assessment is made at the cash-generating unit ("**CGU**") level. A CGU is the smallest identifiable group of assets that generate cash flows that are largely independent of cash inflows from other assets or groups of assets. The Company is currently assessed as a single CGU. Where the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. In assessing VIU, 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. Given the Company is a single CGU, the market capitalization of the Company is a relevant measure of FVLCS.

g) Leases

The determination of whether an arrangement is, or contains, a lease is based on the substance of the arrangement at the inception date, whether fulfilment of the arrangement is dependent on the use of a specific asset or assets or the arrangement conveys a right to use the asset, even if that right is not explicitly specified in an arrangement.

Leases where the Company does not assume substantially all of the risks and benefits of ownership of the asset are classified as operating leases. All of the Company's leases are classified as operating leases and are recognized as an expense in the Consolidated Statements of Loss and Comprehensive Loss on a straight-line basis over the lease term.

h) Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of the respective asset. All other borrowing costs are expensed in the period they occur.

i) Income taxes

Current income taxes

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted, by the reporting date, in the countries where the Company operates and generates taxable income. Current income taxes related to items recognized directly in equity are recognized in equity and not in the Consolidated Statements of Loss and Comprehensive Loss. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred income taxes

Deferred taxes are provided using the liability method on temporary differences as at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted as at the reporting date.

Deferred taxes are recognized for all taxable temporary differences, except in specific circumstances outlined in IAS 12, *Income Taxes* ("**IAS 12**").

Deferred tax assets are recognized for all deductible temporary differences, carry-forward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry-forward of unused tax credits and unused tax losses can be utilized, except in specific circumstances outlined in IAS 12.

The carrying amount of deferred tax assets is reviewed as at each reporting date and reduced to the extent that it is no longer probable that all or part of the deferred tax asset will be utilized.

Unrecognized deferred tax assets are reassessed as at each reporting date and are recognized to the extent that it has become probable the benefit will be recovered.

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to offset current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, would be recognized subsequently if new information about facts and circumstances existing at the acquisition date changed. The adjustment would either be treated as a reduction to goodwill (as long as it does not exceed goodwill) if it is incurred during the measurement period or in profit or loss.

Revenue, expenses and assets are recognized net of the amount of sales tax, except where the sales tax incurred on a purchase of assets or services is not recoverable from the taxation authority, in which case the sales tax is recognized as part of the cost of acquisition of the asset or as part of the expense item as applicable. Trade accounts receivable or accounts payable and accrued liabilities are stated with the amount of sales tax included.

The net amount of sales tax recoverable from, or payable to, the taxation authority is included as part of trade accounts receivable or accounts payable and accrued liabilities in the Consolidated Statements of Financial Position.

j) Revenue recognition

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 contracts 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 the estimated 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 subscription services such as data subscriptions and software as a service. Customers simultaneously receive and consume subscription services; therefore, performance obligations are satisfied over time. Revenue is recognized upon delivery for data products such as archive data and custom reports, which are performance obligations satisfied at a point in time upon transfer of control. Other products and services include percentage of completion projects and sales of Class B transponders, which are recognized either as satisfied over time or at a point in time, depending on the nature of the 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, Class B transponders and other data products. 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. 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 gave rise to the change occur. 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 contact or an anticipated contract and generate or enhance the Company's resources that will be used in satisfying the performance obligations in the future.

Deferred contract costs for the Company consist of sales commissions related directly to a contract.

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-price 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.

k) Fair value of data transferred in non-monetary transactions

In the prior year, the Company provided data in exchange for research and development expense and data processing services. The fair value of the data provided was recognized as revenue, determined based on the fair value of the goods or services received. When the fair value of the goods or services received cannot be measured reliably, revenue is determined based on comparable revenue transactions with third parties and the Company's pricing methodology.

l) Foreign currency translation

A functional currency is the currency of the primary economic environment in which the entity operates and is normally the currency in which the entity generates and expends cash. Each entity that is part of the Company determines its own functional currency. Each entity's financial statements are translated from their functional currency to CAD, which is the presentation currency of these Consolidated Financial Statements.

Transactions

Foreign currency transactions are initially recorded at the foreign exchange rate prevailing at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated at the foreign exchange spot rate as at the reporting date. All differences are recorded in the Consolidated Statements of Loss and Comprehensive Loss. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the initial transaction. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rate at the date when the fair value is determined.

Translation

The assets and liabilities of foreign operations are translated into CAD at year-end exchange rates and their revenue and expense items are translated at exchange rates prevailing at the date of the transactions. The resulting exchange differences are recognized in other comprehensive (loss) income. On disposal of a foreign operation, the foreign exchange in accumulated other comprehensive loss relating to that particular foreign operation is recognized in income in the Consolidated Statements of Loss and Comprehensive Loss.

m) Financial instruments

Financial assets and liabilities are recognized when the Company becomes a party to the contractual provisions of the instrument. Financial assets are derecognized when the rights to receive the cash flows from the assets have expired or have been transferred and the Company has transferred substantially all risks and rewards of ownership. Financial assets and liabilities are offset, and the net amount is reported in the Consolidated Statements of Financial Position when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the asset and settle the liability simultaneously.

Trade receivables

Trade receivables are amounts due from customers for goods sold or services performed in the ordinary course of business. These are classified in current assets, except for the portion expected to be realized or paid beyond twelve months of the Consolidated Statements of Financial Position date, if any, which are classified as non-current. Trade receivables are recognized initially at the amount of consideration that is unconditional, unless they contain significant financing components, when they are recognized at fair value. The Company holds trade receivables with the objective of collecting contractual cash flows and therefore measures them subsequently at amortized cost using the effective interest method.

Due to the short-term nature of current receivables, their carrying amount is considered to be the same as their fair value.

Accounts payable and accrued liabilities

Accounts payable and accrued liabilities are unsecured and are usually paid within 30 to 60 days of recognition. The carrying amounts of accounts payable and accrued liabilities are considered to be the same as their fair values, due to their short-term nature. Accounts payable and accrued liabilities also includes, provisions, and other payables. Accounts payable and accrued liabilities are recognized at the amount required to be paid, less, when material, a discount to reduce accounts payable and accrued liabilities to fair value. Subsequently, accounts payable and accrued liabilities are measured at amortized cost using the effective interest rate method. Financial liabilities are classified as current liabilities if payment is due within twelve months. Otherwise, they are presented as non-current liabilities.

The Company is not party to any derivative financial instruments.

Impairment of financial assets

At each reporting date, the Company assesses whether there is objective evidence that a financial asset is impaired. Objective evidence that financial assets are impaired can include default or delinquency by a debtor, restructuring or an amount due to the Company on terms that the Company would not otherwise consider, or indications that a debtor or issuer will enter bankruptcy. Trade receivables are reviewed qualitatively on a case-by-case basis to determine whether they need to be written off.

The Company applies the IFRS 9, *Financial Instruments* ("**IFRS 9**") simplified approach to measuring expected credit losses ("**ECLs**"), which uses a lifetime expected loss allowance for all trade receivables and contract assets. To measure the expected credit losses, trade receivables, unbilled receivables, and other assets, have been grouped based on shared credit risk characteristics and the days past due.

The expected loss rates are based on payment profiles of sales over prior periods and the corresponding historical credit losses experienced during this period. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle receivables.

Impairment losses on financial assets are measured at amortized cost and are calculated as the difference between the carrying amount and the present value of the estimated future cash flows discounted at the asset's original effective interest rate. Losses are recognized in profit or loss and recorded as ECL against receivables. When a subsequent event causes the impairment loss to decrease, the decrease is reversed through profit or loss.

n) 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 debentures 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 rate method and are 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.

o) Government assistance

Government assistance is periodically received in the form of grants, loans or ITCs (see "Research and development expenditures") that may be repayable at a rate based on future company performance. Government assistance with predetermined repayment requirements or conditional criteria is recorded as a liability when received or until the conditions are satisfied. If no predetermined repayment requirements exist, the assistance is treated as a reduction in the cost of the related item.

Interest-free government loans are measured at amortized cost using the effective interest rate method. The interest rate used is based on the market rate for a comparable instrument with a similar term. The difference between the fair value at inception and the loan proceeds received is recorded as a government grant. The grant portion is split between operating costs and capital costs based on the costs to which the loan relates. The grant related to capital is recognized as a reduction to the carrying amount of an eligible asset and is realized over the life of the asset as reduced amortization expense. The grant related to operating expenses is recognized in cost of revenue.

p) Stock-based compensation and Employee Share Purchase Plan ("ESPP")

Stock options

The Company recognizes compensation cost for all stock options granted to employees under the exactEarth stock option plan. exactEarth measures at fair value all stock options issued to employees or directors. The option exercise price is the share price of the Company's common shares at the date of the grant. IFRS 2, Share-based Payments ("**IFRS 2**"), requires that the Company record these amounts as contributed surplus. The fair value of the direct grants of stock is determined by the quoted market price of the Company's stock at the time of the award and the fair value of stock options is determined using the Black-Scholes option pricing model. The fair value of awards at the date of grant is recorded as an expense in these Consolidated Financial Statements and is recognized over the vesting period based on the number of options expected to vest. When options are exercised, they are settled with shares.

Long-term incentive plan

The Company has established a long-term incentive plan ("**LTIP**") for executives and certain employees. Under the terms of this plan, participants are eligible to receive incentive remuneration in the form of Restricted Share Units ("**RSUs**") and Performance Share Units ("**PSUs**").

RSUs are time-based and will vest on a cliff or graded basis, depending on the type of RSU. Type one RSUs cliff vested three years after the grant date. Type two RSUs vested on a graded basis at 25% one year after the grant date and 75% two years after the grant date. Type three RSUs vested on a graded basis of 50% at two and three years after the grant date. Type four RSUs vest on a graded basis of 33.3% at three, four and five years after the grant date. 2019 RSUs vest on a graded basis of 40%, 30% and 30% at one, two and three years after the grant date. Each RSU, once vested, entitles the holder to receive one common share of the Company, settled in shares or cash at the discretion of the Company.

PSUs cliff vest three years after the grant date, multiplied by the performance multiplier. The performance multiplier is based on adjusted earnings before interest, taxes, depreciation and amortization ("**AEBITDA**") growth over the vesting period. An AEBITDA compound annual growth rate ("**CAGR**") of 10% or less corresponds with the minimum multiplier of zero, a CAGR of 20% corresponds with a multiplier of one and a CAGR of 30% or more corresponds with the maximum multiplier of two. CAGRs between 10% and 30% during the vesting period will result in multipliers calculated on a straight-line basis along the scale between zero and two.

The Company amended the Share Unit Plan as of April 26, 2018, and now intends to equity settle the RSUs and PSUs to satisfy obligations under the LTIP plan. The estimated value of the RSUs is recognized as compensation expense over the vesting period based on the grant date value of the Company's shares and the time elapsed during the vesting period and is presented as contributed surplus.

Deferred Share Unit Plan

The Company has adopted a Deferred Share Unit ("**DSU**") plan for non-employee directors. Directors are required to receive a portion of their annual compensation in the form of DSUs and can elect to increase the percentage paid in DSUs. The DSUs vest over the quarterly service period for the director after the grant date and will be settled upon the director's retirement from the Board of Directors.

Each DSU entitles the holder to receive either cash, based on the share value at the time of settlement, or one common share of the Company. The estimated value of the DSUs is recognized as compensation expense over the vesting period based on the market value of the Company's shares at the end of each period and the time elapsed during the vesting period and is presented as a liability in the Consolidated Statements of Financial Position.

ESPP

The Company implemented the ESPP during the quarter ended July 31, 2016. The ESPP offers employees the option of contributing between 1% and 10% of their gross salary towards the purchase of common shares of the Company. The Company will issue one share for every four shares that employees purchase during the ESPP year, which runs from March 1 to February 28. The Company's matching contribution will be issued to the employee contingent upon the employee remaining employed by the Company on the last day of the ESPP year. The fair values on the date that the employees commit to purchase shares are used to determine the applicable compensation expense to the Company. The compensation expense is recognized over the period from the date the employee acquires the shares to the date the Company matching shares are issued to the employee. The accumulated amount of ESPP expense charged to income, but not yet issued, is included in contributed surplus.

q) Employee future benefit plan

Defined contribution pension plan

The Company sponsors a defined contribution pension plan for certain of its employees. The cost of providing benefits through the defined contribution pension plan is charged to income in the period in which the contributions become payable.

r) Provisions

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. Where the Company expects some or all of a provision to be reimbursed, for example under an insurance contract, the reimbursement is recognized as a separate asset, but only when the reimbursement is virtually certain. The expense relating to any provision is presented in the Consolidated Statements of Loss and Comprehensive Loss net of any reimbursement. If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, where appropriate, the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

s) Other assets

Other assets consist of contract asset balances, which include capitalized costs incurred to obtain revenue contracts and asset balances related to revenue contracts with a significant financing component. In prior years, other assets included purchased small vessel tracking transponders delivered to the customer, but not yet installed. The cost and related revenue were recognized upon installation.

t) Critical judgments and estimates

The preparation of the Company's Consolidated Financial Statements requires management to make judgments, estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses, and the disclosure of contingent assets and liabilities at the end of the reporting period. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods.

The key assumptions concerning the future and other key sources of estimation uncertainty as at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Company bases its assumptions and estimates on parameters available when the Consolidated Financial Statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market fluctuations or circumstances arising beyond the control of the Company. Such changes are reflected in the assumptions when they occur.

The following are the critical judgments, estimates and assumptions that have been made in applying the Company's accounting policies:

Forecasted cash flow

The Company uses a forecasted cash flow to assess the Company's ability to continue as a going concern. Significant judgment is required to forecast the amount of new sales orders and total revenue and the timing of the related cash flows.

Allowance for doubtful accounts

The Company establishes an allowance for doubtful accounts using the simplified ECL model. The Company ECL model uses a provision matrix to apply historical loss rates to outstanding receivable balances. Judgement is required in determining the grouping of receivables based on shared credit risk characteristics as well as determining historical loss rates which are reflective of future economic conditions.

Fair value of financial liabilities

The fair values of long-term loans are calculated using discounted cash flows with a discount rate indicative of the Company's borrowing rate when the funding is received. The discount rate uses Level II inputs, based on observable market data.

Impairment

The recoverable amount for intangible assets and PP&E is based on FVLCS, estimated using market capitalization.

Share-based payments

Share-based payment expense is measured based on the grant date Black-Scholes option pricing model for stock options.

Revenue recognition and contracts in progress

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 estimated SSP. 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 inputs from the Company's pricing team, including historical SSP.

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.

Revenue on fixed-price contracts with performance obligations satisfied over time is recognized on a percentage of completion basis. In applying the accounting policy to fixed-price contracts, judgment is required in determining the estimated costs to complete a contract. These cost estimates are reviewed as at each reporting period and by their nature may give rise to income volatility. To estimate income (loss) on completion, the Company takes into account factors inherent to the contract by using historical and/or forecast data. When total contract costs are likely to exceed total contract revenue, the expected loss is recognized immediately and recorded in accounts payable and accrued liabilities in the Consolidated Statements of Financial Position. The accrual is drawn down over the completion of the contract using the percentage of completion method.

3. CHANGES TO ACCOUNTING POLICIES AND FUTURE ACCOUNTING CHANGES

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.

Standards issued, but not yet effective or amended up to the date of issuance of the Company's Consolidated Financial Statements, are also listed below. This listing is of standards and interpretations issued that the Company reasonably expects to be applicable at a future date. The Company intends to adopt these standards when they become effective.

NEW STANDARDS ADOPTED

IFRS 2, *Share-based Payments*

In June 2016, the IASB issued final amendments to IFRS 2, which clarifies how to account for certain types of share-based payment transactions. The amendments provide requirements on the accounting for: (i) the effect of vesting and non-vesting conditions on the measurement of cash-settled share-based payments; (ii) share-based payment transactions with a net settlement feature for withholding tax obligations; and (iii) a modification to the terms and conditions of a share-based payment that changes the classifications of the transaction from cash-settled to equity-settled. The amendments are effective for annual periods beginning on or after January 1, 2018, with early adoption permitted. There were no adjustments related to the amendments to IFRS 2 in the 2019 Consolidated Financial Statements.

IFRS 9, *Financial Instruments*

Effective November 1, 2018, the Company adopted IFRS 9 in its 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, accounts receivable, 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.

(in thousands of Canadian dollars, except where otherwise noted and share data)

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-month 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 accounts receivable, the Company applies the simplified provision matrix approach permitted by IFRS 9, which requires lifetime ECLs to be recognized from initial recognition.

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.

Classification impact

IFRS 9 introduced new financial instrument classification guidance. The classification effects of adopting IFRS 9 are noted below. There was no effect on the carrying value of the Company's financial assets upon adoption of IFRS 9.

Financial statement line	IAS 39 classification	IFRS 9 classification
Cash and cash equivalents	Loans and receivables	Amortized cost
Short-term investments	Loans and receivables	Amortized cost
Accounts receivable	Loans and receivables	Amortized cost
Accounts payable and accrued liabilities	Amortized cost	Amortized cost
Loans payable	Amortized cost	Amortized cost

IFRS 15, *Revenue from Contracts with Customers ("IFRS 15")*

Effective November 1, 2018, the Company adopted IFRS 15 using the modified retrospective approach. 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.

On adoption of IFRS 15, the after-tax impact was a reduction of the opening 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, net of tax of nil	$	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 Consolidated Statements of Financial Position and amortized over the period of expected benefit using the estimated customer retention period, 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 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 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 does not result in a new distinct performance obligation, the transaction price is updated as well as the measure of progress and results in 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.

Impacts on the Consolidated Financial Statements

(in thousands of Canadian dollars, except where otherwise noted and share data)

The following tables summarize the impacts of adopting IFRS 15 on the Company's Consolidated Financial Statements:

Consolidated Statements of Financial Position as at October 31, 2019:	As reported	Increases (decreases)	Before IFRS 15
Other assets	$ 209	$ (209)	$ -
Other long-term assets	366	(137)	229
Accounts payable and accrued liabilities	4,840	5	4,845
Deferred revenue	3,499	(40)	3,459
Other long-term liabilities	1,466	9	1,475
Deficit	(126,238)	(320)	(126,558)

Consolidated Statements of Loss and Comprehensive Loss for the year ended October 31, 2019:			
Net loss	$ (8,483)	$ 17	$ (8,466)
Loss per share (basic and diluted)	(0.39)	-	(0.39)

International Financial Reporting Interpretations Committee ("IFRIC") 22, *Foreign Currency Transactions and Advance Consideration ("IFRIC 22")*

IFRIC 22 clarifies the appropriate exchange rate to use on initial recognition of an asset, expense or income when advance consideration is paid or received in a foreign currency. The new interpretation was effective for annual periods beginning on or after January 1, 2018. There were no adjustments related to the adoption of IFRIC 22 in the 2019 Consolidated Financial Statements.

NEW STANDARDS ISSUED BUT NOT YET ADOPTED

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

IFRS 16 is a new standard effective for fiscal years beginning on or after January1, 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 using the modified retrospective approach and as a result the comparative information will not be restated and will continue to be reported under IAS 17 and IFRIC 4, *Determining Whether an Arrangement Contains a Lease*.

The extent of the impact on the Consolidated Financial Statements of adoption of the standard has not yet been determined. However, based on the review completed to date, the Company believes that on adoption of IFRS 16 there will be no impact on revenue but 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 and an increase to depreciation expense and finance costs, offset by lower operating lease expenses. Additionally, an increase in cash flow from operating activities is also expected as lease payments will be recorded as financing outflows in the Consolidated Statement of Cash Flows.

The lease liability will be measured at the present value of the future lease payments at the date of adoption. A valuation approach to discount the population of leases has been developed and the Company is in the final stages of assessing the methodology, the deemed commencement date for calculation of the right-of-use assets and the incremental borrowing rate to be applied.

In general, the right-of-use asset will be depreciated using the straight-line method from the date of adoption to the end of the lease term. Interest on the lease liability will be calculated using the effective interest method with rent payments reducing the liability.

The quantitative impact of adopting IFRS 16 will be provided in the Company's Q1 2020 Interim Condensed Consolidated Financial Statements. The Company is currently in the process of upgrading its existing systems, processes and internal controls to account for IFRS 16.

IFRIC 23, *Uncertainty over Income Tax Treatments ("IFRIC 23")*

IFRIC 23 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 on its Consolidated Financial Statements.

4. GOVERNMENT ASSISTANCE

Strategic Innovation Fund Loan

On October 18, 2018, exactEarth signed a loan agreement with the Strategic Innovation Fund ("**SIF**"). Under this agreement, exactEarth 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 based on performance in fiscal 2023, which is used to calculate a Repayment Rate. The Repayment Rate is applied to annual Gross Business Revenue for the payment in February of the subsequent years. Total repayments cannot exceed a maximum of 1.3 times the cash received, including interest. The implied interest rate if maximum repayments are required, assuming equal payments over 15 years, is 2.86%.

During the year ended October 31, 2018, the Company received payment for the first claim of $1,425 and a further $1,222 was received in the year ended October 31, 2019. An additional receivable of $881 was recorded in accounts receivable for funding related to eligible expenditures incurred prior to October 31, 2019.

The SIF loan is measured initially at fair value, and subsequently measured at amortized cost using the effective interest rate method. An interest rate of 14% was used based on the market interest rate for a comparable instrument with a similar term when the funding was received.

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 capital grant is recorded as a reduction in the cost of the related asset and amortized to income over the life of the asset.

(in thousands of Canadian dollars, except where otherwise noted and share data)

Recognized in the Consolidated Statements of Financial Position as at:	October 31, 2019	October 31, 2018
Loans payable	$ 878	$ 336
Accounts receivable	881	128
Property, plant and equipment – net capital grant	172	63

The amounts recognized in respect of the SIF loan for the year ended October 31 are as follows:

Recognized in the Consolidated Statements of Loss and Comprehensive Loss as follows:	2019	2018
Cost of revenue – operating grant	$ (1,363)	$ (1,154)
Interest expense	67	-
Reduction of amortization expense	(27)	-
Net impact	$ (1,323)	$ (1,154)

Federal Development Agency Loan

On November 16, 2012, exactEarth signed an interest-free loan agreement with the Federal Development Agency for Southern Ontario ("**FED DEV**"). Under this agreement, exactEarth was eligible to receive interest-free repayable funding for certain expenditures incurred from May 6, 2011 to March 31, 2014 to a maximum of $2,491. The interest-free loan is repayable in 60 equal consecutive monthly instalments that began on April 1, 2015. During the year ended October 31, 2019, the Company made payments of $452 (October 31, 2018 – $533). The undiscounted amount payable related to the FED DEV loan is $205 (October 31, 2018 – $657) (note 9).

The FED DEV interest-free loan is measured at amortized cost, using the effective interest rate method. An interest rate of 8% was used based on the market interest rate for a comparable instrument with a similar term when the funding was received. 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 and a capital grant based on the relative proportion of eligible expenditures incurred. The capital grant is recorded as a reduction in the cost of the related asset and amortized to income over the life of the asset.

The amounts recognized in respect of the FED DEV loan for the year ended October 31, 2019 are as follows:

Recognized in the Consolidated Statements of Loss and Comprehensive Loss as follows:	2019	2018
Interest expense	$ 33	$ 67
Reduction of amortization expense	(10)	(10)
Net impact	$ 23	$ 57

South Africa Safety Initiative for Small Vessels ("OASIS") Funding

In June 2019, the Company obtained funding for the Madagascar Safety Initiative for Small Vessels ("**MSIS**") as part of the OASIS contract to fund the set-up of small vessel tracking operations in Madagascar. This funding is available to partially offset eligible project costs between June 2019 and March 2020. The MSIS funding of $234 was recognized as an offset to product development expense of $238 in the year ended October 31, 2019.

Technology Demonstration Program Funding

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, exactEarth 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 final claim was received during the year ended October 31, 2019. The funding recognized as an offset to cost of revenue in the year ended October 31, 2019 was nil (October 31, 2018 – $202).

5. INVESTMENT

On November 10, 2015, the Company entered into a shareholder's agreement, licence agreement and services agreement with Myriota Pty. Ltd. ("**Myriota**"). Myriota is located in Adelaide, Australia, and has a fiscal year ending June 30. The Company invested $2,000 Australian dollars ("**AUD**") (CAD$1,894) and in-kind contributions in 2016 valued at AUD$400 in exchange for 32% ownership, options for further equity investment, and a licence to an advanced signal processing technology. This technology was developed at the University of South Australia in order to develop advanced terminals, infrastructure and applications for the fast-growing Satellite Internet of Things ("**SIoT**") focused on the location tracking and sensor data applications global market. The Company assessed the fair value of each component and allocated the full value of the investment to the licence based on a relative fair value calculation. The fair value of the technology was assessed using a discounted cash flow method. The Company will pay a 3.5% royalty on revenue derived from the technology under licence. Services will be provided to Myriota in exchange for additional equity or for cash consideration. Management is expecting amortization of this licence to commence in late calendar 2020 when the development of the technology is incorporated into exactEarth's product lines. Myriota completed an AUD$20,000 equity raise in the three months ended April 30, 2018. The equity raise resulted in the dilution of the Company's ownership interest to 18%.

The Company has significant influence over Myriota, and as a result, accounts for the investment using the equity method. The Company has determined that it has significant influence over Myriota based on its representation on the Board of Directors. Myriota incurred losses during the year ended October 31, 2019. The Company's share of these losses is not reflected in the Company's Consolidated Statements of Loss and Comprehensive Loss because the investment has a carrying value of nil based on the relative fair value calculation. The Company does not have an obligation to fund losses and will recognize its share of Myriota's income only after its share of the income equals its share of losses not recognized.

(in thousands of Canadian dollars, except where otherwise noted and share data)

6. PROPERTY, PLANT AND EQUIPMENT

PP&E consist of the following:

Cost	Leasehold Improvements	Satellites	Electrical Equipment	Computer Hardware	Furniture and Fixtures	Total
at October 31, 2018	$ 53	$ 58,621	$ 4,962	$ 3,992	$ 91	$ 67,719
Additions	-	815	-	368	-	1,183
Disposals	-	-	-	(318)	-	(318)
Deductions	-	(91)	-	(136)	-	(227)
Translation adjustment	-	-	8	-	-	8
at October 31, 2019	$ 53	$ 59,345	$ 4,970	$ 3,906	$ 91	$ 68,365

Accumulated Depreciation	Leasehold Improvements	Satellites	Electrical Equipment	Computer Hardware	Furniture and Fixtures	Total
at October 31, 2018	$ 48	$ 54,999	$ 4,672	$ 3,903	$ 88	$ 63,710
Depreciation expense	1	501	37	27	1	567
Disposals	-	-	-	(318)	-	(318)
Translation adjustment	-	-	8	-	-	8
at October 31, 2019	$ 49	$ 55,500	$ 4,717	$ 3,612	$ 89	$ 63,967

Net Book Value	Leasehold Improvements	Satellites	Electrical Equipment	Computer Hardware	Furniture and Fixtures	Total
at October 31, 2018	$ 5	$ 3,622	$ 290	$ 89	$ 3	$ 4,009
at October 31, 2019	$ 4	$ 3,845	$ 253	$ 294	$ 2	$ 4,398

Included in PP&E as at October 31, 2019, is $611 (October 31, 2018 – $2,074) of satellite equipment that has not yet commenced being depreciated as the assets are under construction and not yet ready for use.

During the year ended October 31, 2019, the Company recognized cost reimbursements of $136 (October 31, 2018 – $63) related to capital funding from the SIF loan for the purchase of computer hardware. The Company earned cost reimbursements for assisting in the development of a satellite under construction in the year ended October 31, 2019 of $91 (October 31, 2018 – $541).

(in thousands of Canadian dollars, except where otherwise noted and share data)

7. INTANGIBLE ASSETS

Intangible assets consist of the following:

Cost	Computer Software	Internally Developed Technology	Technology Licences	Data Rights	Total
at October 31, 2018	$ 3,795	$ 8,893	$ 2,715	$ 13,031	$ 28,434
Additions	-	10	-	-	10
at October 31, 2019	$ 3,795	$ 8,903	$ 2,715	$ 13,031	$ 28,444

Accumulated Amortization	Computer Software	Internally Developed Technology	Technology Licences	Data Rights	Total
at October 31, 2018	$ 3,758	$ 8,513	$ 2,479	$ 11,964	$ 26,714
Amortization expense	12	69	-	111	192
at October 31, 2019	$ 3,770	$ 8,582	$ 2,479	$ 12,075	$ 26,906

Net Book Value	Computer Software	Internally Developed Technology	Technology Licences	Data Rights	Total
at October 31, 2018	$ 37	$ 380	$ 236	$ 1,067	$ 1,720
at October 31, 2019	$ 25	$ 321	$ 236	$ 956	$ 1,538

Intangible assets that have not yet commenced amortization are technology licences of $237 (October 31, 2018 – $371).

Significant individual assets included in the amounts above as at October 31, 2019 are as follows:

Description	Category	Carrying Amount	Remaining Amortization Period (Months)
De-collision software	Internally developed technology	$ 235	99
Myriota licence	Technology licence	$ 179	84
L3Harris data licence	Data rights	$ 956	100

The L3Harris Technologies, Inc. ("**L3Harris**") data licence represents access to data from the full constellation of Iridium Next. As these satellites were put into service, they began amortizing on an individual satellite basis. The remaining amortization period is calculated based on the amortization taken to date as a percentage of the total expected amortization, applied to the useful life of the constellation. All of the Iridium Next satellites were in service as of February 2019.

8. IMPAIRMENT OF LONG-LIVED ASSETS

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 that, 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 CGU. The recoverable amount is the greater of VIU and FVLCS.

(in thousands of Canadian dollars, except where otherwise noted and share data)

The recoverable amount used in the impairment test at October 31, 2019 was based on FVLCS using a market approach to determine the Company's market capitalization. The market capitalization, based on the year-end market capitalization less estimated costs to sell, up to and including October 31, 2019, was $5,647. The carrying value, represented by the book value of the Company's shareholders' equity was $2,119. The carrying value was lower than the fair value; therefore, no impairment was recognized at October 31, 2019 (October 31, 2018 – PP&E $7,617 and intangible assets $3,268). The market capitalization of the Company is considered a Level 1 measurement within the fair value hierarchy.

9. LOANS PAYABLE, FINANCIAL INSTRUMENTS AND FOREIGN EXCHANGE

a) Loans payable

Loans payable comprise the following:

	October 31, 2019		October 31, 2018	
FED DEV loan (note 4)	$	202	$	621
SIF loan (note 4)		878		336
Convertible debentures		9,211		-
	$	10,291	$	957
Less: current portion of loans		202		459
Long-term loans payable	$	10,089	$	498

Principal repayments are due as follows:

For the years ending October 31		
2020	$	205
2021	$	-
2022	$	-
2023	$	-
2024	$	13,176
Thereafter	$	3,352

b) Financial instruments

Fair values

For the Company's cash, short-term investments, accounts receivable, and accounts payable and accrued liabilities, the fair values approximate their respective carrying amounts due to their short-term maturities.

FED DEV loan

The FED DEV loan has a carrying value as at October 31, 2019 of $202 (October 31, 2018 – $621). The fair value of the FED DEV loan was calculated using discounted cash flows with a discount rate of 8% indicative of the Company's borrowing rate when the funding was received. The fair value of the FED DEV loan using the Company's current borrowing rate of 14% is $200 (October 31, 2018 – $596).

(in thousands of Canadian dollars, except where otherwise noted and share data)

Larus loan

The Company entered into an agreement to licence the Total::Insight™ IP from Larus Technologies Corporation ("**Larus**") for $700, payable in 24 equal monthly payments commencing April 15, 2016. The loan was paid in full as of April 30, 2018. During the year ended October 31, 2018, $145 was paid against the note payable. The Larus loan has a carrying value as at October 31, 2019 of nil (October 31, 2018 – nil).

SIF loan

The SIF loan has a carrying value as at October 31, 2019 of $878 (October 31, 2018 – $336), which approximates fair value. The fair value of the SIF loan was calculated using discounted cash flows with a discount rate of 14% indicative of the Company's borrowing rate when the funding was received.

Convertible debentures

On December 13, 2018, the Company announced the private placement of 13,000 convertible debentures at a price of $1 per convertible debenture for gross proceeds of $13,000. Each convertible debenture is convertible into 2,000 common shares of the Company, being an effective conversion price of $0.50 at the option of the holder, at any time prior to the fifth anniversary of the closing date.

Holders of the convertible debentures are entitled to interest payments as follows: for the first two years following the closing date, interest of 9% (consisting of 3% to be paid in cash semi-annually in arrears and 6% to be accrued and payable at maturity); and for the following three years, interest of 8% (consisting of 4% to be paid in cash semi-annually in arrears and 4% to be accrued and payable at maturity).

In addition, the Company may elect, at its option, to redeem all or part of the convertible debentures at any time following the issue date at the redemption price set forth below plus accrued and unpaid interest, if redeemed during the calendar year:

Year	Percentage
2019	110.0%
2020	107.5%
2021	105.0%
2022	102.5%
2023	100.0%

The Company has the right to redeem the outstanding convertible debentures, commencing on the second anniversary of the closing date, if the volume weighted average price of the Company's common shares for the preceding 20 trading days is at or above $1.00. The Company may elect to settle the redemption in common shares (at its discretion) at a per common share amount equal to the volume weighted average price for the preceding 20 trading days prior to the date of the notice of redemption.

The private placement resulted in net proceeds of $11,854 to the Company after deduction of $1,146 of expenses for the private placement and the strategic review process, including advisory, legal, listing and other fees. The fair value of the liability component of the convertible debentures of $9,801 was calculated using discounted cash flows with a discount rate of 14% indicative of the Company's borrowing rate when the funding was received. The balance of the proceeds of $3,199 is included as a component of contributed surplus in equity. Transaction costs of $864 have been allocated to the liability component and $282 was allocated to the equity component based on the allocation of the proceeds.

(in thousands of Canadian dollars, except where otherwise noted and share data)

The convertible debentures have a carrying value of $9,211 at October 31, 2019, which approximates fair value as the loan was recorded at fair value when the cash was received. In the year ended October 31, 2019, the Company recognized interest expense of $1,307 including amortization of the deferred transaction costs, related to the convertible debentures.

Short-term investments

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.

Foreign currency

As at October 31, 2019, approximately 28% of cash, 55% of accounts receivable and 46% of accounts payable and accrued liabilities are denominated in foreign currencies, respectively (October 31, 2018 – 63%, 87%, and 54%, respectively). These foreign currencies include the US dollar ("**USD**"), British pound ("**GBP**") and euro ("**EUR**").

The Company is exposed to foreign currency risk on the following cash and cash equivalents, accounts receivable and accounts payable and accrued liabilities denominated in foreign currencies:

Currency		Cash		Accounts receivable		Accounts payable and accrued liabilities
USD	$	940	$	844	$	1,042
GBP	£	342	£	62	£	198
EUR	€	670	€	242	€	317

Fair value hierarchy

The Company categorizes financial assets and liabilities recorded at fair value in the Consolidated Statements of Financial Position based on a fair value hierarchy. Fair values of assets and liabilities included in Level I are determined by reference to quoted prices in active markets for identical assets and liabilities. Assets and liabilities in Level II include valuations using inputs other than the quoted prices for which all significant inputs are based on observable market data, either directly or indirectly. Level III valuations are based on inputs that are not based on observable market data. The disclosure of the fair value of the FED DEV loan, SIF loan and the Larus Technologies debt are considered to be a Level II measurement.

Foreign currency risk

Transaction exposure

The Company is exposed to foreign currency risk as a result of transactions in currencies other than its functional currency, the CAD. The majority of the Company's revenue is transacted in CAD. Portions of the revenue are denominated in USD, GBP and EUR. The majority of salaries, purchases, certain operating costs and manufacturing overhead are incurred primarily in CAD.

Translation exposure

The Company's foreign operation is exactEarth Europe. The assets and liabilities of the foreign operations are translated from GBP into CAD using the exchange rates in effect as at the dates of the Consolidated Statements of Financial Position. Unrealized translation gains and losses are recognized in other comprehensive (loss) income. The accumulated currency translation adjustments are recognized in income when there is a reduction in the net investment in the foreign operations.

Foreign currency risks arising from translation of assets and liabilities of foreign operations into the Company's functional currency are generally not hedged.

The majority of the Company's foreign currency risk resides with USD, GBP, and EUR transactions. To evaluate the sensitivity of net loss to potential changes in exchange rates, actual changes in exchange rates during the fiscal year were considered as an indicative range of potential changes in exchange rates as noted in the table below. The rates were entered into models that show the valuation impact to customer contracts, cash balances and foreign currency denominated monetary Consolidated Statements of Financial Position items.

Potential foreign currency impacts for the year ended October 31, 2019:

Currency	Change in exchange rate vs CAD	Increase (decrease) in net loss
USD	+3%	($27)
	-3%	$27
GBP	+2%	($5)
	-2%	$5
EUR	+2%	$36
	-2%	($36)

(in thousands of Canadian dollars, except where otherwise noted and share data)

Potential foreign currency impacts for the year ended October 31, 2018:

Currency	Change in exchange rate vs CAD	Increase (decrease) in net loss
USD	+3%	$79
	-3%	($79)
GBP	+3%	($77)
	-3%	$77
EUR	+6%	$83
	-6%	($83)

Interest rate risk

The Company's risk exposure to market interest rates relates primarily to new financing or renewals of existing financing arrangements. The Company's policy is to review its borrowing requirements on a continual basis and to enter into fixed or variable interest rate borrowing arrangements as required. Both the FED DEV loan and SIF loan are non-interest bearing loans recorded at amortized cost. The convertible debentures are at a fixed interest rate. Therefore, the Company is not exposed to fluctuations in interest rates.

Credit risk

Credit risk arises from the inability of customers to discharge their obligation to the Company. If one or more customers were to delay, reduce or cancel orders, the overall orders of the Company may fluctuate and could adversely affect the Company's operations and financial condition.

The maximum exposure to credit risk as at the Consolidated Statements of Financial Position dates is best represented by the carrying amount of the Company's accounts receivable and unbilled revenue. The Company is exposed to credit risk from the potential default by counterparties that carry the Company's cash and attempts to mitigate this risk by dealing only with large financial institutions with good credit ratings. All of the financial institutions the Company transacts with meet these qualifications.

The Company, in the normal course of business, monitors the financial condition of its customers and reviews the credit history of each new customer. Accounts receivable are non-interest bearing and are generally on 30- to 60-day payment terms. Six customers comprise 50% of trade accounts receivable as at October 31, 2019 (October 31, 2018 – six customers comprised 52%).

The carrying amount of trade accounts receivable is reduced through the use of a lifetime ECL allowance. The ECL allowance was calculated based on historical default patterns for grouped aged receivables. At October 31, 2019, an allowance of $64 (October 31, 2018 – $5) was recognized in the Consolidated Statements of Loss and Comprehensive Loss within selling, general and administrative expenses for the ECL on trade accounts receivable. When a receivable balance is considered uncollectible, it is written off against the allowance for doubtful accounts and trade accounts receivable. Subsequent recoveries of amounts previously written off are credited against selling, general and administrative expenses.

(in thousands of Canadian dollars, except where otherwise noted and share data)

Liquidity risk

Liquidity risk is the Company's ability to meet its financial obligations when they come due. The Company monitors its risk to a shortage of funds using a recurring liquidity planning tool. This tool considers the maturity of its financial assets (e.g., trade accounts receivable and other financial assets), liabilities (e.g., accounts payable and accrued liabilities and loans), and projected cash flows from operations. The Company's objective is to maintain a balance between continuity of funding and flexibility through borrowing facilities available through the Company's bank, and purchase contracts. The Company's policy is to ensure that adequate funding is available from operations, established lending facilities and other sources as required.

The tables below summarize the maturity profile of the Company's financial liabilities based on contractual payments.

October 31, 2019	< 3 Months	3 to 12 Months	1 to 5 Years	> 5 Years	Total
Government loans payable	$ 123	$ 82	$ 176	$ 3,352	$ 3,733
Accounts payable and accrued liabilities	4,307	533	-	-	4,840
Long-term incentive plan liability	-	-	203	-	203
Commission payable	101	241	128	-	470
Convertible debenture	46	195	17,875	-	18,116
Total	$ 4,577	$ 1,051	$ 18,382	$ 3,352	$ 27,362

October 31, 2018	< 3 Months	3 to 12 Months	1 to 5 Years	> 5 Years	Total
Government loans payable	$ 123	$ 369	$ 165	$ 1,553	$ 2,210
Accounts payable and accrued liabilities	4,241	446	95	-	4,782
Long-term incentive plan liability	-	9	162	-	171
Commission payable	93	143	95	-	331
Total	$ 4,457	$ 967	$ 517	$ 1,553	$ 7,494

10. CAPITAL MANAGEMENT

The primary objectives of the Company's capital management are:

- to ensure a sufficient liquidity position to finance general and administrative expenses, working capital, research and development and capital expenditure; and
- to provide an adequate return to shareholders by pricing products and services commensurately with the level of risk undertaken.

The Company monitors capital on a basis consistent with others in the industry, based on total debt to shareholders' equity. Capital is defined as shareholders' equity as presented in the Consolidated Statements of Financial Position, excluding accumulated other comprehensive loss, and total debt is defined as the sum of short-term and long-term liabilities. The Company uses the percentage of total debt to total capital to monitor the capitalization of the Company. The Company is not subject to any capital requirements imposed by a regulator.

(in thousands of Canadian dollars, except where otherwise noted and share data)

11. SHARE CAPITAL

Issued capital

The Company has authorized an unlimited number of preferred shares, of which none are outstanding. The Company has authorized an unlimited number of common shares with no par value. As at October 31, 2019, the issued and outstanding shares totalled 21,703,415 (October 31, 2018 – 21,626,288). In addition, 26,000,000 common shares are issuable upon conversion in full of the convertible debentures as described in note 9.

	Number of Shares	Value of Shares
Balance as at October 31, 2017	21,614,120	$ 123,781
Add: Share issuances	12,168	13
Balance as at October 31, 2018	21,626,288	$ 123,794
Add: Share issuances	77,127	29
Balance as at October 31, 2019	21,703,415	$ 123,823

Stock-based compensation

The Company recognizes compensation cost for all stock options granted to employees under the exactEarth stock option plan. The exercise price for options granted in February 2016 is the Spinout Transaction share price of the Company's common shares at the date of the grant, which was $6.50 per share. Additional options were granted on March 26, 2019 with an exercise price of $0.34 per share. The maximum number of common shares authorized for grant under the option plan is 3,255,512.

All options vest on a graded basis depending on the type of option. Type one options vest on a 40%, 30% and 30% basis over three years and have a contractual life of six years. Type two options vest on a 25% and 75% basis over two years and have a contractual life of six years. Type three options vest on a 40%, 30% and 30% basis in years three through five and have a contractual life of eight years. 2019 options vest on a 40%, 30% and 30% basis in years one through three and have a contractual life of six years. All stock options are accounted for as equity-settled awards.

The fair value of options was estimated at the date of grant using the Black-Scholes option pricing model with the following assumptions:

	2016 Spinout Transaction			
	Type One	Type Two	Type Three	2019
Average risk-free interest rate	0.65%	0.63%	0.94%	1.63%
Dividend yield	0%	0%	0%	0%
Average volatility	77.1%	77.4%	74.4%	93.77%
Average expected life of options (years)	4	3.75	6	4
Remaining contractual life (years)	2.3	2.3	4.3	5.4
Weighted average fair value of options outstanding	$ 1.08	$ 1.06	$ 1.32	$ 0.23
Weighted average exercise price of options outstanding	$ 6.50	$ 6.50	$ 6.50	$ 0.34

(in thousands of Canadian dollars, except where otherwise noted and share data)

Volatility was calculated using the historical volatility of comparable companies for the period commencing when those entities were publicly traded and corresponding to the expected life of each option type. The estimated fair value of the options is amortized to expense over the vesting periods of the options. For the year ended October 31, 2019, the stock-based compensation expense recognized was $86 (October 31, 2018 – $238). This amount was added to contributed surplus. Vested options can be exercised prior to their expiry date. There are 580,758 vested options as at October 31, 2019 (October 31, 2018 – 300,523) with a weighted average exercise price of $6.50.

A summary of the option activity is as follows:

	Stock Options
Balance as at October 31, 2017	1,090,425
Forfeited	(22,180)
Expired	(10,555)
Balance as at October 31, 2018	1,057,690
Granted	250,000
Forfeited	(91,556)
Expired	(44,221)
Balance as at October 31, 2019	1,171,913

Options forfeited and expired had a weighted average exercise price of $6.50.

Employee Share Purchase Plan

The ESPP expense amount for the year ended October 31, 2019 was $10 (October 31, 2018 – $17). The maximum number of common shares authorized for grant under the ESPP is 432,110. There were 20,129 shares issued under the ESPP at February 28, 2019. The estimated number of ESPP shares outstanding, if all ESPP shares earned from March 1 to October 31, 2019 were issued, is 23,610 (October 31, 2018 – 11,254).

Long-term incentive plan

The following details the RSUs, PSUs and DSUs as at October 31, 2019:

	RSU	PSU	DSU
Share unit balance, October 31, 2018	155,614	41,903	503,035
Share units granted	1,475,000	-	529,085
Share units settled	(111,352)	-	(180,496)
Share units corrected (forfeited)	1,873	(41,903)	-
Share unit balance, October 31, 2019	1,521,135	-	851,624
Aggregate fair value of units outstanding as at the end of the period	$ 566	$ -	$ 226
Weighted average fair value of units outstanding as at the end of the period	$ 0.37	$ -	$ 0.27

For the year ended October 31, 2019, compensation expense of $323 (October 31, 2018 – $43) was recognized for the Company's LTIP. During the year ended October 31, 2019, the Company settled 111,352 RSUs for $18 in shares, resulting in the issuance of 56,998 shares, net of $15 of withholding taxes remitted on behalf of employees and $2 in cash (October 31, 2018 – 226,877 RSUs for $238 in cash).

(in thousands of Canadian dollars, except where otherwise noted and share data)

The PSUs vested in February 2019 and were forfeited because they vested at a multiplier of nil.

The Share Unit Plan was amended effective April 26, 2018, including allowing the Company to issue new shares to settle RSUs. Outstanding RSUs and PSUs can now be settled in cash, treasury shares or issuance of equity at the option of the Company. It is the intention of the Company to settle these share units in equity, and as a result of this modification, the RSU liability was remeasured to the date of the modification and $122 was reallocated to contributed surplus.

Outstanding DSUs can be settled in cash or equity at the option of the holder. If the holder elects to receive shares, the Company will purchase shares in the market to satisfy the obligation. The DSUs are accounted for as cash-settled. During the year ended October 31, 2019, the Company settled 180,496 DSUs for $46 in cash (October 31, 2018 – 55,278 DSUs for $58 in cash).

Loss per share

Basic and diluted loss per share for the year ended October 31:

		2019		2018
Numerator for basic and diluted loss per share available to common shareholders:				
Net loss attributable to common shareholders	$	(8,483)	$	(16,223)
Denominator for basic and diluted loss per share:				
Weighted average number of shares outstanding		21,672,201		21,626,288
Basic and diluted loss per share	$	(0.39)	$	(0.75)

There are 1,544,745 share units that are antidilutive at October 31, 2019 (October 31, 2018 – 166,868).

12. COMMITMENTS AND CONTINGENCIES

Lease commitments

During the year ended October 31, 2019, the Company has incurred $203 (October 31, 2018 – $185) in lease expenses.

The Company has commitments under lease agreements as follows:

		Less than 1 Year		1 to 5 Years		After 5 Years
Facilities	$	96	$	137	$	-
Photocopier lease		2		3		-
Computer lease		12		-		-
Total	$	110	$	140	$	-

Capital commitments

As at October 31, 2019, capital commitments in respect of the purchase of PP&E were $3,337 (October 31, 2018 – $3,741). There were no other material capital commitments outstanding as at October 31, 2019.

(in thousands of Canadian dollars, except where otherwise noted and share data)

L3Harris commitment

The Company has an agreement with L3Harris ("**L3Harris Agreement**") to receive satellite automatic identification system ("**S-AIS**") data from the L3Harris AppStar payloads on-board Iridium NEXT Constellation, Iridium's second-generation satellite constellation. As at October 31, 2019, there were 58 AppStar payloads on the Iridium NEXT Constellation commissioned and in service. In February 2019, L3Harris asserted that the initial operating capacity ("**IOC**") has been achieved as a result of the deployment of 58 satellites as of that date. At the point of IOC, the L3Harris Agreement stipulates that the Company will share 40% of annual data revenue on the first USD$40,000 of annual revenue, and 33% of additional revenue with L3Harris. Prior to IOC, the revenue share is proportional to the number of payloads in service one year prior.

The agreement specifies an operational fee of USD$750 per quarter. This payment will continue for 12.5 years following the date at which all AppStar payloads are in service. The following table summarizes the CAD operational fees commitment, which includes the fixed payments to L3Harris, but does not include revenue share.

L3Harris Fees	Less than 1 Year	1 to 5 Years	After 5 Years
Operational fees payable	$ 3,951	$ 15,802	$ 26,828

The L3Harris Agreement was amended subsequent to October 31, 2019 (note 19).

FleetMon commitment

The Company receives terrestrial automatic identification system ("**AIS**") data from FleetMon, and in return, pays FleetMon 20% of revenue on data sales that include terrestrial AIS data. In addition, a further fee of 90 EUR per year for terrestrial data is included in exactEarth integrated products. All payments are made in EUR at a contractual exchange rate of $1.5152.

SRT Marine Systems PLC commitment

The Company has a collaboration agreement with SRT Marine Systems PLC (**"SRT"**) under which SRT provides Advanced class B Satellite Enabled AIS (**"ABSEA"**) transponders to the Company's customers, and exactEarth pays SRT 30% of revenue on data sales related to SRT ABSEA transponders. As at October 31, 2019, there are no contracts containing SRT transponders and no amounts owing to SRT.

PAZ commitment

The agreement related to the PAZ satellite includes a commitment to pay a monthly operating fee of $20 to Hisdesat after commissioning in December of 2018, assuming a useful life of 10 years.

Hisdesat Fees	Less than 1 Year	1 to 5 Years	After 5 Years
Operational fees payable	$ 240	$ 960	$ 980

Royalty commitment

The Company has entered into an agreement with Larus, which includes a commitment, which takes effect after the conclusion of the 24-month term of the agreement, to pay a 30% royalty on the gross sales of products that are derived from the Larus Total::Insight™ technology. The technology is expected to be put in use in fiscal 2021, and royalty payments are expected to commence at that time.

(in thousands of Canadian dollars, except where otherwise noted and share data)

Claims or legal actions

The Company does not have any outstanding claims or legal actions.

13. INCOME TAXES

The following are the major components of income tax expense for the years ended October 31:

		2019		2018
Current income tax expense	$	121	$	152
Deferred income tax expense (recovery):				
Origination and reversal of temporary differences	$	(2,211)	$	(4,026)
Losses not recognized		2,211		4,026
Deferred income tax expense	$	-	$	-
Total income tax expense	$	121	$	152

The Company's consolidated effective tax rate for the year ended October 31, 2019 was nil (October 31, 2018 – nil). The difference in the effective tax rates compared to the Company's statutory income tax rates was a result of the Company incurring losses during the period on which no tax recovery was recorded because the realization of the deferred tax asset was not considered to be probable.

		2019		2018
Loss before income taxes	$	(8,362)	$	(16,071)
Statutory tax rate		26.5%		26.5%
Income taxes based on the statutory income tax rate		(2,216)		(4,259)
Losses not recognized		2,211		4,026
Permanent differences – other		5		78
Permanent differences – non-deductible impairment		-		155
Withholding taxes		121		152
Income tax expense	$	121	$	152

The Canadian statutory tax rate during the year ended October 31, 2019 was 26.5% (October 31, 2018 – 26.5%).

The income tax expense during the year ended October 31, 2019 of $121 (October 31, 2018 – $152) represents withholding taxes on revenue generated from foreign countries. The Company has deemed the withholding taxes to be unrecoverable and has recognized the amount as an expense.

Components of deferred income taxes movement are as follows for the years ended October 31:

		2019		2018
Taxable temporary differences	$	170	$	277
Non-capital losses		(170)		(277)
Total change in deferred income taxes	$	-	$	-

(in thousands of Canadian dollars, except where otherwise noted and share data)

The deferred income tax asset (liability) recognized in the Consolidated Statements of Financial Position for the years ended October 31 is comprised of the following:

		2019		2018
Taxable temporary differences	$	(475)	$	(305)
Non-capital losses		475		305
Deferred income tax	$	-	$	-

For the purposes of the above table, deferred income tax assets are shown net of deferred income tax liabilities where these occur in the same entity and jurisdiction.

Deductible temporary differences and unused tax losses for which no deferred income tax assets have been recognized are attributable to the following:

		2019		2018
Canadian deductible temporary differences	$	1,460	$	785
Scientific research and experimental development (“**SRED**”) pool	$	2,710	$	2,710
PP&E and intangible assets	$	33,332	$	39,742
Financing fees	$	243	$	-
Canadian non-capital tax losses	$	77,539	$	61,359
Canadian capital tax losses	$	617	$	617
UK non-capital losses	$	1,336	$	2,859

These unused Canadian income tax losses expire from 2029 through 2039. The UK non-capital losses have an unlimited carry-forward period. The SRED pool does not expire.

Unrecorded ITCs are as follows:

		2019		2018
Federal	$	680	$	680
Ontario	$	166	$	166

These unrecorded ITCs expire from 2029 through 2035.

14. EMPLOYEE BENEFITS

Defined contribution pension plan

The Company has a defined contribution pension plan for its employees. During the year ended October 31, 2019, the Company’s contributions, which are based on the contributions by employees, were $176 (October 31, 2018 – $199) and are included in cost of revenue and selling, general and administrative expenses in the Consolidated Statements of Loss and Comprehensive Loss.

Salaries and benefits

Total salaries and employee benefits expense for the year ended October 31, 2019 was $7,026 (October 31, 2018 – $6,690).

(in thousands of Canadian dollars, except where otherwise noted and share data)

15. RELATED PARTIES

Compensation of key management personnel and Board of Directors

The following table includes compensation of the key management personnel and Board of Directors for the years ended October 31, 2019 and 2018, included in the Consolidated Statements of Loss and Comprehensive Loss. Key management personnel include the Company's Chief Executive Officer and the executives who report directly to him.

		2019		2018
Short-term salaries and benefits	$	1,932	$	1,368
Post-employment benefits		34		40
Long-term incentive plans		239		(8)
Stock options		67		243
	$	2,272	$	1,643

Short-term salaries and benefits include expenses for base salaries, bonuses and other short-term benefit expenses. Post-employment benefits represent the Company's defined contribution pension plan.

Related Parties

The following table details transactions and balances between the Company and Myriota (note 5), and the Company and Hisdesat and Ewing Morris Investment Partners Ltd., share and convertible debenture holders that have significant influence.

For the year ended October 31:		2019		2018
Revenue from related parties	$	1,496	$	765
PAZ operating and launch expense		504		158
Debenture interest		472		-
Directors' expenses		111		1

As at:		October 31, 2019		October 31, 2018
Accounts receivable	$	125	$	280
Accounts payable and accrued liabilities		95		18
Loans payable		3,330		-
Other long-term liabilities		249		-

16. REVENUE FROM CONTRACTS WITH CUSTOMERS

Disaggregation of revenue from contracts with customers

Revenue is divided into three categories based on the types of products sold. Subscription services are recognized over the contract term, data products are sold on demand and recognized on delivery, and other products and services include various other revenue streams and are recognized as performance obligations are satisfied.

(in thousands of Canadian dollars, except where otherwise noted and share data)

Revenue by product type for years ended October 31:	2019	2018
Subscription services	$ 13,222	$ 11,298
Data products	1,126	1,002
Other products & services	849	655
Total revenue	$ 15,197	$ 12,955

Remaining performance obligations

The table below contains the aggregated amount of revenue expected to be realized in the future from partially or fully unsatisfied performance obligations as at October 31, 2019. The amounts disclosed below represent the remaining value of contracts for the supply of products and services.

Revenue expected to be recognized in:	2019	2018
Less than one year	$ 10,055	$ 11,677
Thereafter	12,299	19,805
Total	$ 22,354	$ 31,482

Contract balances

As at:	October 31, 2019	October 31, 2018
Trade accounts receivable	$ 2,125	$ 3,329
Unbilled revenue	2,149	911
Contract assets	575	363
Deferred revenue	(3,499)	(2,412)
Net contract balances	$ 1,350	$ 2,191

Contract assets include short- and long-term sales commission assets, deferred contract costs and long-term financing assets. Accounting policies for recognition of an asset from short- and long-term sales commission costs were adopted prospectively in fiscal 2019. Contract asset amortization of $340 was recorded during the year ended October 31, 2019.

The Company recognized $2,243 of the opening deferred revenue balance at November 1, 2018 as revenue during the year ended October 31, 2019.

17. SEGMENT, GEOGRAPHIC AND MAJOR CUSTOMER INFORMATION

The Company has one reportable business segment, which is engaged in the sale of space-based maritime tracking data and related products and services from satellites.

(in thousands of Canadian dollars, except where otherwise noted and share data)

Geographic information

Revenue by geography is based on where the customer is located.

For the years ended October 31:		2019		2018
Canada	$	815	$	626
United States		1,690		1,643
Europe		6,808		5,650
Other		5,884		5,036
	$	15,197	$	12,955

PP&E are attributed to the country in which they are located or, for space-based assets, the country in which they are owned. Intangible assets are attributed to the country where ownership of the asset resides.

		October 31, 2019		October 31, 2018
PP&E				
Canada	$	4,383	$	3,990
United Kingdom		15		19
	$	4,398	$	4,009
Intangible assets				
Canada	$	1,538	$	1,720
United Kingdom		-		-
	$	1,538	$	1,720

For the year ended October 31, 2019, there were no customers with revenue in excess of 10% of the Company's total revenue (October 31, 2018 – no customers).

18. COMPARATIVE BALANCES

The comparative Consolidated Financial Statements have been reclassified from the statements previously presented in order to conform to the current period's presentation.

19. SUBSEQUENT EVENTS

On January 21, 2020, the Company announced that it had reached agreement on an Amended and Restated L3Harris Agreement ("**A&R L3Harris Agreement**"). The A&R L3Harris Agreement updates the terms of the June 2015 L3Harris Agreement. This amended agreement provides the Company with a reduced and simplified cost structure for S-AIS data services.

The parties agreed that full deployment of the system has been achieved and that IOC has occurred.

The fixed fee of USD $750 per quarter (USD $3,000 per year) under the L3Harris Agreement (note 12) is replaced by a fixed fee of USD $358 per month (USD $4,300 per year) under the A&R L3Harris

Agreement. The following table summarizes the CAD operational fees commitment under the A&R L3Harris Agreement, which includes the fixed payments to L3Harris, but does not include revenue share.

L3Harris Fees	Less than 1 Year	1 to 5 Years	After 5 Years
Operational fees payable	$ 5,663	$ 22,650	$ 38,454

Under the L3Harris Agreement, the Company paid L3Harris a quarterly revenue share amount of 40% of S-AIS data revenues and L3Harris paid exactEarth an 18% share of L3Harris S-AIS data revenues. Under the A&R L3Harris Agreement, the Company will pay a 30% share of S-AIS data revenues for the portion of exactEarth annual S-AIS data revenue which is in excess of USD $16,000 and the Company will receive no share of L3Harris S-AIS data revenues. Under the A&R L3Harris Agreement no revenue share is owed by either party to the other with respect to AIS Analytics sales.

The infrastructure fee and revenue share amendments in the A&R L3Harris Agreement are effective August 1, 2019.

Corporate Information

Board of Directors

Eric Zahler (1, 2, 3)
Chairman of the Board, Chairman of the Corporate Governance and Nominating Committee

Harvey Rein (1, 2, 3)
Chairman of the Audit Committee, Chairman of the Human Resources and Compensation Committee

Miguel Angel Garcia Primo (2)

Lee Matheson (1)

Miguel Angel Panduro Panadero (3)

Peter Mabson
President & Chief Executive Officer of exactEarth

Member of: (1) Audit Committee, (2) Human Resources and Compensation Committee, (3) Corporate Governance and Nominating Committee

Management

Peter Mabson
President & Chief Executive Officer of exactEarth

Sean Maybee
Chief Financial Officer

David Martin
Vice President, Global Sales and Marketing

Peter Dorcas
Vice President, Business Development

Brent van Osch
Vice President, Programs and Operations

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