# ACCELEWARE LTD. MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019

This management's discussion and analysis of financial condition and results of operations ("MD&A") should be read together with Acceleware Ltd.'s ("Acceleware" or the "Company") unaudited condensed interim financial statements and the accompanying notes for the three and nine months ended September 30, 2019, which were prepared in accordance with International Financial Reporting Standards ("IFRS"), and the audited annual financial statements, accompanying notes and MD&A for the year ended December 31, 2018, which have been prepared in accordance with IFRS. Additional information relating to the Company is available on the System for Electronic Document Analysis and Retrieval ("SEDAR") at <a href="https://www.sedar.com">www.sedar.com</a> under Acceleware Ltd.

This MD&A is presented as of November 26, 2019. All financial information contained herein is expressed in Canadian dollars unless otherwise indicated.

## **Forward Looking Statements**

Certain statements contained in this MD&A constitute forward-looking statements. These statements relate to future events or the Company's future performance. All statements other than statements of historical fact may be forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as "seek", "anticipate", "plan", "continue", "estimate", "expect", "may", "will", "project", "predict", "potential", "targeting", "intend", "could", "might", "should", "believes" and similar expressions. These statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking statements. The Company believes that the expectations reflected in these forward-looking statements are reasonable but no assurance can be given that these expectations will prove to be correct and such forward-looking statements included in this MD&A should not be unduly relied upon by investors. These statements speak only as of the date of this MD&A and are expressly qualified, in their entirety, by this cautionary statement.

In particular, this MD&A may contain forward-looking statements, pertaining to the following:

- the expectation of Acceleware's ability to continue operating as a going concern, fund its operations through the sale of its products and services, and access external financing when required;
- the expectation of software revenue growth in the oil and gas sector through innovative licensing arrangements;
- potential benefits of the Company's software to customers, including cost savings and increases to cash flow and productivity;
- the future growth prospects for radio frequency ("RF") heating technology for heavy oil and oil sands based on technical and economic feasibility analyses and testing performed to date;
- the patentability of concepts developed through RF heating research and development ("R&D") efforts;
- the expectation that the positive economic and technical analyses and testing to date will be reinforced by future results of subsequent testing of the RF technology;
- advantages to using Acceleware's products and technology;
- the demand for new products currently under development at the Company;
- ease and efficiency of implementing Acceleware's products; and
- supply and demand for Acceleware's primary software products.

With respect to forward-looking statements contained in this MD&A, the Company has assumed, among other things:

• that the future revenue and resulting cash flow expected by the Company's management ("Management") and ability to attract new financing will be sufficient to fund future operations - this assumption being subject to the risk and uncertainty that the Company may not generate enough cash flow from operating activities to meet its capital requirements and that the Company may not be able to secure additional capital resources from external sources to fund any shortfall. Operating

cash flow may be negatively affected by general economic conditions, increased competition, increased equipment or labour costs, and adverse movements in foreign currencies. Should the Company experience a cash flow shortfall from operating activities, Management's contingency plan may not be sufficient to reverse the shortfall;

- that the world price of oil will continue to improve over the next 12 to 24 months, and that improvement will result in increased demand for the Company's products and technology;
- that the preliminary analyses coupled with lab and field testing that the Company has performed to date regarding the technical and economic feasibility of RF heating technology for heavy oil and oil sands will be confirmed in future commercial-scale testing and in commercial products;
- that the Company will receive all regulatory approvals required to carry out the commercial-scale testing of its RF heating technology;
- that the RF heating concepts developed by the Company are unique, novel and non-infringing of intellectual property owned by others;
- that it will be able to increase sales of its software products and services by focusing on innovative licensing arrangements and continuously improving its products which is subject to the risks that sales in core vertical markets may be negatively affected by general economic conditions, that the Company's R&D efforts may be unable to develop continuous improvements; and
- that it will be able to withstand the impact of increasing competition.

The Company's actual results could differ materially from those anticipated in these forward-looking statements as a result of the risk factors set forth below and elsewhere in this MD&A.

Investors should not place undue reliance on forward-looking statements as the plans, intentions or expectations upon which they are based might not occur. Forward-looking statements include statements with respect to the timing and amount of estimated future revenue and sales and the Company's ability to protect and commercially exploit its intellectual property. Readers are cautioned that the foregoing lists of factors are not exhaustive. The forward-looking statements contained in this MD&A are expressly qualified by this cautionary statement. The Company does not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, unless required by law.

#### **Company Overview**

Acceleware is an innovator of clean-tech oil and gas technologies comprising two business units: RF Heating enhanced oil recovery and High-Performance Computing (HPC) Scientific Software.

RF XL is Acceleware's patented and patent-pending RF heating technology, designed to improve the extraction of heavy oil and bitumen, with the possibility of saving significant production costs. When applied, RF XL has the potential to reduce both capital and operating costs, while offering significant environmental benefits, including immediate greenhouse gas ("GHG") emission reductions, a substantial decrease in land use, the elimination of external water, no requirement for solvents, and no tailings ponds. The Company believes that RF XL technology, as an electrically-driven process, can provide a clear pathway to zero-GHG production of heavy oil and oil sands and provide optimal alignment with industry and government goals to recognize innovation as part of the solution in the oil and gas industry's overall emission reduction plans.\*

Acceleware's HPC segment helps customers meet their oil and gas exploration needs with seismic imaging software that provides the most accurate and advanced imaging available for oil exploration in complex geological zones and formations, and their electronic product development needs with state-of-the-art electro-magnetic (EM) simulation software. For further information about the Company, please visit <a href="https://www.acceleware.com">www.acceleware.com</a>.

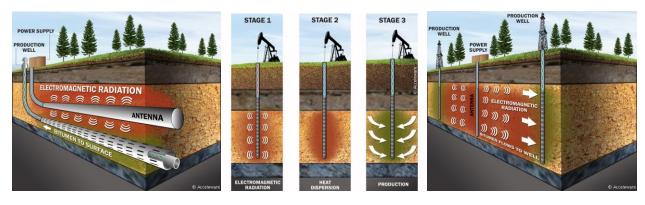
Acceleware was founded in 2004 to build software solutions that targeted the graphics processing unit as a compute platform. The first product was an accelerated finite difference time domain ("FDTD") solution for the EM simulation industry. AxFDTD<sup>TM</sup> has been used by many Fortune 500 companies such as GE, Apple, Samsung, LG, Blackberry, Foxconn, Nikon, Renault, Mitsubishi, Merck, Boeing and Lockheed Martin, many of which continue to use the software today. With AxFDTD, Acceleware was a pioneer in the GPU computing revolution.

## RF Heating

In 2010, Acceleware began investigating technology that would use RF energy for in-situ heating of heavy oil and bitumen. In the ensuing nine years, Acceleware has vigorously developed RF heating technology with two patents granted, 15 additional patent applications pending, and a further 8 patent applications under development. Acceleware has also developed leading edge RF heating simulation software. RF heating for oil production is not a new concept, however, trials to date have shown limited success. Acceleware believes that the limitations experienced to date can be overcome with new technology. Acceleware's RF heating research and development effort has focused on reducing the capital cost of the technology, making it more flexible for use in a variety of resource plays, and improving the scalability of the technology to very long horizontal wells commonly used in Alberta's oil sands and elsewhere. The Company believes that RF heating has the potential to reduce capital and operating costs for heavy oil and oil sands extraction, as well as the industry's environmental footprint by dramatically reducing the use of water and limiting the greenhouse gas emissions associated with current extraction techniques. RF heating also has the potential to significantly reduce land use in the oil sands, and does not involve the injection of chemicals into the reservoir. Acceleware's unique expertise with RF heating technology has also resulted in service revenue both locally and abroad. Acceleware's RF heating technology broadly falls into two versions. Modular RF is a technology mainly aimed at deeper, vertical wells where efficiencies are gained through the innovative approach to downhole RF power generation. The second version, RF XL targets long horizontal wells common to in-situ oil sands production. In the course of the Company's RF heating development and services business, the Company developed sophisticated simulation software tools based on AxFDTD coupled with third party reservoir simulation software. In late 2013, Acceleware commercialized and introduced these simulation tools as AxHEAT<sup>TM</sup>, a product aimed at oil and gas companies investigating the effectiveness of RF heating in increasing the efficiency of heavy oil and oil sands production.\*

\_

<sup>\*</sup> this paragraph contains forward looking information. Please refer to "Forward Looking Statements" and "Risk Factors and Uncertainties" for a discussion of the risks and uncertainties related to such information



Multiple Vertical – RF flood

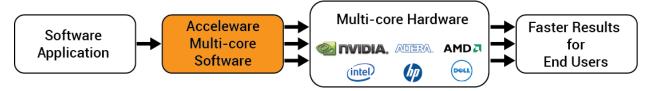
Single Vertical – Cyclic RF flood

Horizontal – RF injector

#### RF heating can be used in a variety of vertical and horizontal well arrangements.

#### High-Performance Computing Software

Acceleware's traditional market has been electromagnetic simulation software, and the Company continues to provide products to this industry. With AxFDTD, most of the major mobile telephone manufacturers in the world are using Acceleware's electromagnetic design solutions to design their products more rapidly. Acceleware's fourth-generation software acceleration solutions that support multi-board GPU systems can accelerate entire industrial simulation and processing applications by over 35 times.



The EM solutions developed by Acceleware can be easily integrated by software developers, saving them the expense and time of migrating their applications to high performance multi-core platforms. Acceleware improves the overall experience for end users of these applications by providing greater computing speed without end users having to learn new skills or change their work processes.

In the EM market, software developers partner with Acceleware to increase the speed of their software. Some of the Company's current software partners include SPEAG, Synopsys, ZMT Zurich MedTech and Keysight Technologies. Acceleware reaches the EM market through a combination of partner channels and direct sales. AxFDTD will continue for the traditional markets and is an enabling technology for AxHEAT.

Recognizing an opportunity in the similarity between electromagnetic FDTD and certain seismic imaging algorithms, Acceleware entered the seismic imaging market in 2008. The Company's first product was a GPU accelerated Kirchhoff Time Migration solution, followed closely by CPU and GPU enabled Reverse Time Migration ("RTM") library, AxRTM<sup>TM</sup> in 2009. In 2013, Acceleware introduced AxWave<sup>TM</sup>, a forward modelling variant of AxRTM which allows customers to accurately model seismic acquisition and perform data characterization. In late 2014, Acceleware added AxFWI<sup>TM</sup> a revolutionary modular full waveform inversion ("FWI") application to its seismic imaging suite. AxFWI allows geophysicists to create high quality subsurface velocity models in dramatically less time than before. Going forward the Company will access the oil and gas geoscience software market with innovative licensing structures through a direct sales modelAs part of the switch, the Company has discontinued reseller arrangements with seismic independent software vendors ("ISV").



Seismic forward modelling in complex subsurface geology using AxWave

Acceleware was founded in February 2004 by a group of graduate students and professors from the University of Calgary's Electrical Engineering department and became a public company on the TSX Venture Exchange in January 2006 through a reverse takeover of a capital pool company, Poseidon Capital Corp. The Company is headquartered in Calgary, Alberta. On September 30, 2019, Acceleware had 21 employees and long-term contractors including: 3 in administration; 6 in sales, marketing and product management; and 12 in research and development and engineering.

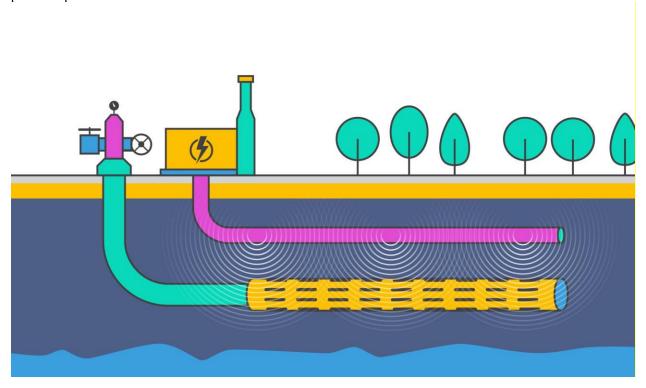
#### **Overall Performance**

During the three months ended September 30, 2019 (Q3 2019), Acceleware recorded lower revenue compared to both the three months ended September 30, 2018 (Q3 2018) and the three months ended June 30, 2019 (Q2 2019) partially due to a change in the HPC software revenue model, and partially due to the overall depressed oil and gas technology market. The Company discontinued its HPC software reseller model in Q1 2019 and started selling seismic software directly to oil and gas customers while leveraging innovative new licensing models. This direct-sale approach is expected to result in fewer individual software license sales but higher revenue per sale, which may cause greater volatility in revenue from quarter-to-quarter. Operating loss in Q3 2019 improved 42% to \$603,100 compared to \$1,042,828 in Q3 2018 primarily due to higher government research and development ("R&D") funding assistance for RF heating development. This also contributed to a 48% improvement in total comprehensive loss, which was \$551,412 in Q3 2019 and \$1,051,292 for the same period in 2018.

Throughout Q3 2019, Acceleware continued to advance the development of its patented and patent-pending RF XL heating technology, while taking steps to enhance the Company's position ahead of its planned commercialization of this transformative technology. Specifically, the Company initiated field testing of a prototype RF converter with partner GE and reported positive final test results subsequent to the quarter, completed design work on critical subsurface components, and initiated detailed design of surface facilities with partner, Scovan Engineering. The R&D team also conducted additional bench-top testing of RF XL components with various oil sands core samples, completed various mechanical and electrical de-risking activities, and continued work on several new patent applications. During Q3 2019, Acceleware's scientists and engineers completed laboratory tests on a next generation RF electronics architecture, and new subsurface RF antenna concepts. On the corporate front, the Company executed a full redesign of the Company's website and marketing collateral to highlight the benefits and features of RF XL for target audiences such as potential customers and investors, and strengthened its management team with the appointment of a new Chief Financial Officer.

Acceleware continues to estimate that the cost to complete the RF XL pilot will range from \$16 million to \$20 million. Through a project financing agreement with a major oil sands producer, and contribution agreements with Sustainable Development Technology Canada ("SDTC") and Emissions Reduction Alberta ("ERA") together with other sources, the total financing raised to date for the commercial-scale test is in excess of \$16 million. Acceleware has also appointed GMP Securities L.P. ("GMP FirstEnergy") as exclusive financial advisor to assist the Company in fully funding the RF XL pilot program. GMP FirstEnergy provided advice on the completion of the project funding agreement. As of September 30, 2019, the Company has received funding totalling \$4,681,986 pursuant to the contribution agreements with SDTC and ERA, and an additional \$300,000 under the project funding agreement

with the oil sands producer, all three arrangements being milestone based. Acceleware's application and all supplemental requested information for its planned commercial-scale test pilot of RF XL at the Rigel oil sands property in northeast Alberta was submitted to the Alberta Energy Regulator ("AER") earlier in 2019, yet timing for receipt of regulatory approval remains uncertain. In the interests of accelerating the timeline for the test, during Q3 2019 Acceleware advanced discussions with several interested producers regarding potential test sites and partnerships. \*



## Schematic of Commercial-Scale Test of RF XL in Oil Sands

During Q3 2019, Acceleware recognized revenue of \$197,001 - 25% lower than the \$263,978 recognized during Q3 2018. The decrease is primarily a result of a decline in HPC software services revenue. The Company discontinued its custom software services business in 2018. Revenue in Q3 2019 fell 8% compared to the \$213,475 recorded in Q2 2019. The decline in revenue relative to the most recent quarter is due to a decrease in HPC seismic software revenue. With the change in its software revenue model, the Company now expects fewer software license sales, but higher revenue per sale, potentially leading to greater volatility in revenue from quarter to quarter. On a segmented basis, HPC revenue decreased 31% to \$181,076 in Q3 2019 compared to \$263,978 in Q3 2018 on lower custom software services revenue. HPC revenue fell 14% from the \$211,225 recorded in Q2 2019 due to fewer seismic software license sales. RF heating revenue rose in Q3 2019 to \$15,925, from \$nil in Q3 2018 on increased AxHEAT software and maintenance revenue. RF heating revenue was also higher in Q3 2019 compared to the \$2,250 recorded in Q2 2019 on higher software and maintenance revenue.

Revenue was 66% higher in the nine months ended September 30, 2019, increasing to \$1,299,209 from the \$784,335 recorded in the nine months ended September 30, 2018 due to higher HPC seismic software sales. Substantially all revenue recorded in both periods was attributable to the Company's HPC business segment.

Operating loss showed a 42% improvement in Q3 2019 at \$603,100 compared to \$1,042,828 in Q3 2018 primarily due to increased government assistance for RF heating R&D and lower overall R&D expenditures. The Company incurred an operating loss in Q2 2019 of \$445,253, slightly lower than in Q3 2019, due to higher government assistance. The Company's total comprehensive loss for Q3 2019 improved 48% to \$551,412 compared to the total

comprehensive loss of \$1,051,292 recorded in Q3 2018. The lower total comprehensive loss is also a result of increased government assistance for RF R&D. Lower revenue and lower government assistance contributed to the larger total comprehensive loss in Q3 2019 compared to the total comprehensive loss of \$453,145 recorded in Q2 2019.

For the nine months ended September 30, 2019, operating loss improved 63% decreasing to \$921,437 from the \$2,522,350 recorded in the nine months ended September 30, 2018 due to higher revenue and increased government assistance for R&D. For the same reasons, total comprehensive loss fell 63% to \$937,059 in the nine months ended September 30, 2019, compared to a loss of \$2,536,580 recorded in the nine months ended September 30, 2018.

On a segmented basis, loss from operations attributable to the RF heating segment was 46% lower in Q3 2019 at \$550,511 compared to \$1,013,330 in Q3 2018, due to lower R&D expense resulting from an increase in government funding. Operating loss for RF heating was 22% higher in Q3 2019 compared to the loss of \$452,572 recorded in Q2 2019 due to lower government funding for R&D expenditures in Q3 2019. The HPC segment incurred an operating loss of \$52,589 in Q3 2019 compared to an operating loss of \$29,498 in Q3 2018. HPC operating loss increased in Q3 2019 compared to the operating income of \$7,319 recorded in Q2 2019 primarily due to lower seismic software revenue and higher general and administrative ("G&A") expenses.

For the nine months ended September 30, 2019, RF heating operating loss decreased 29% to \$1,599,052 from \$2,236,754 for the nine months ended September 30, 2018 principally due to reduced R&D expense as a result of increased government funding. For the nine months ended September 30, 2019, HPC operating income was \$677,614 compared to an operating loss of \$285,596 for the nine months ended September 30, 2018 due to higher seismic software revenue and lower R&D expense.

At September 30, 2019, Acceleware had working capital of \$1,526,072 (December 31, 2018 – \$2,051,577), \$4,228,942 (December 31, 2018 - \$3,225,126) in cash and cash equivalents, and \$190,403 (December 31, 2018 - \$189,012) in combined short-term and long-term debt in the form of leases. The increase in short-term and long-term lease obligations reflects the adoption of IFRS 16 on January 1, 2019. The increase in cash is a result of increased collection of trade receivables and receipt of government assistance milestone funding for the RF XL field test.

The Company actively manages its cash flow and investment in new products to match its cash requirements to cash generated from operations, external funding, and capital raising activities. In order to maximize cash generated from operations, the Company plans to continue to focus on high gross margin software products marketed through a combination of direct and reseller models; to minimize operating expenses where possible; and to limit capital expenditure. As the Company continues to develop its RF heating technology, new research and development investments will be financed through a combination of internal cash flow from the high-performance computing business, project funding agreements, government assistance and external financing. Management believes that successful execution of its business plan will result in sufficient cash flow and new financing to fund projected operational and investment requirements. However, no assurances can be given that the Company will be able to achieve all or part of the objectives discussed above, or that sufficient financing from outside sources will be available. Further, if the Company's operations are unable to generate cash flow levels at or above current projections, the Company may not have sufficient funds to meet its obligations over the next twelve months. Should such events occur, Management is committed to implementing all or a portion of its contingency plan. This plan has been developed and designed to provide additional cash flow, and includes, but is not limited to, deferring certain additional product development initiatives, reducing sales, marketing and general and administrative expenses, and seeking outside financing. The failure of the Company to achieve one or all of the above items may have a material adverse impact on the Company's financial position, results of financial performance and cash flows.\*

<sup>\*</sup> this paragraph contains forward looking information. Please refer to "Forward Looking Statements" and "Risk Factors and Uncertainties" for a discussion of the risks and uncertainties related to such information

#### **Recent Highlights and Events**

November 13, 2019 - Acceleware announced a successful field test of a prototype RF converter developed in partnership with GE Research ("GE"). The test produced record results and achieves another important milestone in the process of bringing the Company's transformational RF XL technology to commercial reality. The prototype, developed in partnership with GE, represents the Company's continuous advancement towards the commercialization of its RF XL system, enabling a low-cost, low-carbon method of heavy oil production. Acceleware's partnership with GE includes initiatives and technologies to integrate GE's proprietary high-efficiency Silicon Carbide critical power electronics technology with RF XL and complete a multi-stage pilot test to advance their development and ultimate commercialization.

**September 17, 2019** - Acceleware announced that it has granted stock options to acquire up to 550,000 common shares of the Corporation to certain of its employees, consultants, officers and directors. The options have an exercise price of \$0.12 per common share and expire on September 11, 2024. Of the 550,000 options granted, 500,000 shall vest on the first anniversary of the grant date and 50,000 shall vest on the second anniversary of the grant date. The Corporation's stock option plan allows for 10,461,167 common shares to be reserved for issuance under the plan. Upon issuance of the options granted, there will be 9,866,824 common shares reserved under options outstanding, leaving 594,343 common shares that may be reserved for issuance under the Corporation's stock option plan.

September 3, 2019 - Acceleware announced the appointment of key executive, Tracy Grierson as Chief Financial Officer.

March 13, 2019 – Acceleware announced the filing of a patent application on the use of RF XL in shipping bitumen by rail, and an update on the commercialization of its RF XL enhanced oil recovery method. The update included new information on:

- (i) The design and production of a prototype silicon carbide ("SiC") RF generator with partner GE. GE and Acceleware have jointly completed the assembly and factory-acceptance testing for the initial module of the RF XL prototype, SiC RF generator. GE is now working on the assembly of all eight modules which together will comprise the full 2 MW generator to be used in the commercial-scale test.
- (ii) Acceleware has continued to develop intellectual property for the RF XL platform, and has recently been awarded a second patent. Claims from the new patent detail an antenna for RF heating applications that can intrinsically match the impedance across a wide variety of materials including air, sand, hydrocarbon formation materials, and water, thereby maximizing power. In addition, the claim details that the antenna is also capable of functioning at very high temperatures.
- (iii) Work on the commercial-scale field test of the RF XL technology with partner Prosper Petroleum Ltd. ("Prosper"), as announced on July 17, 2018. Design and engineering work is substantially complete for the commercial-scale test of RF XL. Acceleware and engineering partner, Scovan Engineering, have completed the front-end engineering design for the surface facilities required for the test, while the Company's drilling and completions consultants, including Codeco-Vanoco Engineering Inc., have substantially completed designs for the proprietary RF XL heater wells, along with the industry standard producer well designs.

**February 7, 2019 -** Acceleware announced the appointment of key executive, Laura McIntyre as Vice President, Engineering.

**January 31, 2019** - Acceleware announced that it has granted stock options to acquire up to 2,956,066 common shares of the Corporation to certain of its employees, consultants, officers and directors. The options have an exercise price of \$0.13 per common share and expire on January 31, 2024. Of the 2,956,066 options granted, 1,237,500 shall vest on the first anniversary of the grant date, 1,237,500 shall vest on the second anniversary of the grant date, 240,533 shall vest when the share price of the common shares of the Corporation closes at or above \$0.165 for ten consecutive trading days, and 240,533 shall vest when the share price of the common shares of the Corporation closes at or above \$0.195 for ten consecutive trading days. The Corporation's stock option plan allows for 10,391,767 common shares to be reserved for issuance under the plan. Upon issuance of the options granted, there will be 9,676,824 common shares reserved under options outstanding, leaving 714,943 common shares that may be reserved for issuance under the Corporation's stock option plan.

#### Strategic Update

#### RF Heating

In 2010, Acceleware began investigating technology that would use RF energy for in-situ heating of heavy oil and bitumen. In the ensuing nine years, Acceleware has been granted two patents, has filed a further 15 patent applications for RF heating technology, and has developed leading edge simulation software. Eight additional patent applications for RF heating concepts are currently underway as the Company expands its portfolio of intellectual property in line with product development. RF heating for oil production is not a new concept, however, trials to date have shown limited success. Acceleware believes that the limitations experienced to date can be overcome with its proprietary technology. Acceleware's RF heating research and development effort has focused on reducing the capital cost of the technology, making the technology more flexible for use in a variety of resource plays, and improving the scalability of the technology to very long horizontal wells commonly used in Alberta's oil sands and elsewhere. The Company believes that RF heating has the potential to reduce capital and operating costs for heavy oil and oil sands extraction, as well as the industry's environmental footprint by dramatically reducing the use of water and limiting the greenhouse gas emissions associated with current extraction techniques. Acceleware's unique expertise with RF heating technology has also resulted in service revenue both locally and abroad. In the course of the Company's RF heating development and services business, the Company developed sophisticated simulation software tools based on AxFDTD coupled with third party reservoir simulation software. In late 2013, Acceleware commercialized and introduced these simulation tools as AxHEAT<sup>TM</sup> a product aimed at oil and gas companies investigating the effectiveness of RF heating in increasing the efficiency of heavy oil and oil sands production. \*

In each of the four years up to 2017, the Company received funding from NRC-IRAP to partially finance its RF heating technology development. Acceleware's RF heating R&D program is focused on removing certain known technical limitations preventing the widespread adoption of this technology in enhanced oil recovery. In 2015, the Company conducted successful laboratory testing of critical components of the technology. In 2016, the Company commenced testing in larger scale field experiments, with additional components, to more closely replicate a commercial system, and completed the first phase of those tests in 2017.

The Company began preparation for a commercial-scale (2 megawatts and approximately 1000m horizontal well) field test in 2018 at Prosper's Rigel oil sands property near Fort McKay in north-eastern Alberta. Acceleware has been awarded a \$10 million non-repayable contribution to complete a commercial-scale field test of its RF XL technology. The funding will be provided by SDTC and ERA in accordance with their mandates to bring clean technologies to market that are economically viable and reduce GHG emissions. Acceleware has raised a further \$2 million in funding for the test from a major Canadian oil sands producer. The Company is in the process of attracting partnerships with one or more additional oil sands producers to provide additional financial and technical support for this commercial-scale field test in an oil sands reservoir. In 2018 and year-to-date 2019, the Company has completed development of key components that will be utilized in the commercial-scale test. Acceleware, with partner GE, has completed design, manufacturing, and factory testing of the prototype RF generator that will be used in the test. The prototype RF generator was being field tested at the Company's simulated "ditch" reservoir in Alberta and finalized subsequent to the quarter with record results. Acceleware has also finalized design concepts for drilling and completing RF XL wells, and has completed front-end engineering and design of the surface facilities that will be used during the test. Acceleware's application and all supplemental requested information for its planned commercial-scale test pilot of RF XL at the Rigel oil sands property in northeast Alberta was submitted to the Alberta Energy Regulator ("AER") earlier in 2019, yet timing for receipt of regulatory approval remains uncertain. In the interests of accelerating the timeline for the test, during Q3 2019 Acceleware advanced discussions with several interested producers regarding potential test sites and partnerships.\*

-

<sup>\*</sup> this paragraph contains forward looking information. Please refer to "Forward Looking Statements" and "Risk Factors and Uncertainties" for a discussion of the risks and uncertainties related to such information

#### Software for Geoscience

In 2019, the Company focused on selling seismic imaging software to the oil and gas exploration market, The Company continues to develop its latest release of AxRTM with TTI, which the Company believes is a state-of-the-art RTM seismic imaging product. Complimenting AxRTM is AxWave, a finite-difference forward modelling package. These GPU accelerated and CPU optimized seismic solutions, with dense packaging and improved economics in power and cooling, provide a multi-fold performance increase that reduces lengthy processing times and enables expedited drilling decisions for the oil and gas industry. During late 2014, the Company derived its first revenue from AxFWI, Acceleware's new modular full waveform inversion software application. Full waveform inversion allows geophysicists to dramatically improve subsurface models with less manual processing. In 2019, the Company is continuing the development of its suite of seismic products, as well as adding features, functionality and performance to AxRTM, AxWave and AxFWI. Going forward the Company will access the oil and gas geoscience software market with innovative licensing structures through a direct sales model. As part of the switch, the Company has discontinued reseller arrangements with seismic independent software vendors ("ISV").

## *Electromagnetic software products*

While the Company is focusing on oil and gas, it continues to sell and develop its EM FDTD solution. In the EM market, software is sold to end users primarily through ISVs that have integrated Acceleware's solution into their software packages. Acceleware currently works with some of the world's largest companies in the electronics market, which consists of mobile phone manufacturers, industrial electronics firms, and government organizations. ISVs are an important sales channel for Acceleware, and work with the Company's sales force by selling on Acceleware's behalf, co-selling with Acceleware's sales people, or referring potential customers to Acceleware. Currently, Acceleware's CAE ISV partners include SPEAG, ZMT Zurich MedTech AG, Keysight Technologies, Synopsis, Inc., and Crosslight Software Inc.

To drive future sales growth, Acceleware will work to add new ISV partnerships for the EM market. Beyond expanding the Company's potential customer base, new ISV partnerships also provide Acceleware with additional reselling agents who are strongly incented to cross-sell Acceleware's products alongside their software solutions.\*

In addition to adding ISV partners, Acceleware is working to deliver new products and solutions to address the needs of a larger proportion of the installed base of its ISV partners. The Company is continuously improving its software acceleration products and expects to continue to release improved products with significant increases in performance every year.\*

Going forward, Acceleware will continue to focus on oil and gas, with RF heating, AxRTM, AxWave, AxFWI, and AxHEAT as the main strategic revenue and investment technologies. Innovations and improvements to the FDTD solution will continue for the traditional markets and be an enabling technology for AxHEAT in the energy market. In 2019 year-to-date the Company has increased sales and marketing efforts for these new and competitive technologies including a redesigned RF heating-focussed website and accompanying collateral launched in Q3 2019. This will continue to be a Company priority.\*

<sup>\*</sup> This paragraph contains forward looking information. Please refer to "Forward Looking Statements" and "Risk Factors and Uncertainties" for a discussion of the risks and uncertainties related to such information.

#### **Summary of Quarterly Results**

The following table highlights revenue, cash generated (used) in operating activities, total comprehensive (loss) income and earnings (loss) per share for the eight most recently completed quarters ended September 30, 2019.

		2019			20	2017		
	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4
Revenue	\$197,001	\$213,475	\$888,733	\$3,533,026	\$263,978	\$350,098	\$170,259	\$271,690
Cash generated (used) in operating activities	(\$478,372)	339,678	1,211,576	2,807,350	(551,816)	(310,203)	(543,179)	(336,811)
Total comprehensive (loss) income for the period	(551,412)	(453,145)	67,498	2,437,958	(1,051,292)	(645,911)	(839,377)	(745,937)
Loss (earnings) per share basic and diluted	(\$0.005)	(\$0.004)	\$0.001	\$0.024	(\$0.010)	(\$0.007)	(\$0.009)	(\$0.008)

In Q1 2019, Acceleware recorded its second highest quarterly revenue in the past two years, an outcome significantly higher than that obtained in the year prior quarter (Q1 2018), and second only to Q4 2018. The increase was due to new sales of software licenses for seismic imaging, a result of innovative new licensing models. The Company has discontinued its reseller model for seismic software and is now selling software direct to oil and gas customers. Due to the change in its software revenue model, the Company now expects fewer overall sales transactions, with higher overall revenue, leading to potential increased volatility in quarterly revenue. This was evident in Q3 2019 and Q2 2019 when revenue dropped compared to both Q2 2018 and Q3 2018. As a result of the decrease in revenue, the Company recorded a total comprehensive loss in Q3 2019 and Q2 2019 after two consecutive quarters of positive total comprehensive income. Higher revenue in Q4 2018 and the subsequent collection of receivables, combined with increased government funding for R&D contributed to three consecutive quarters of positive cash flow from operating activities up to Q2 2019, a trend which reversed in Q3 2019.

# **Results of Operations**

#### Overall Performance

Operating loss was 42% lower in Q3 2019 at \$603,100 compared to \$1,042,828 in Q3 2018. The improvement is despite 25% lower revenue, and is caused by a 39% reduction in expenses overall. The decrease in expenses was led by a 72% decline in R&D expenditures due to increased government assistance for RF heating development. Operating loss was lower in Q2 2019 due to higher government assistance for RF heating development. The Company had a total comprehensive loss for Q3 2019 of \$551,412. While this was 48% lower than the total comprehensive loss of \$1,051,292 recorded in Q3 2018, it is 22% higher than the total comprehensive loss recorded in Q2 2019, in both cases due to the amount recognized for government assistance.

For the nine months ended September 30, 2019, operating loss declined 63% to \$921,437 from the \$2,522,350 recorded in the nine months ended September 30, 2018 due to 66% higher revenue and increased government assistance contributing to a 72% reduction in R&D expenditures. For the nine months ended September 30, 2019, total comprehensive loss was \$937,059, a reduction of 63% compared to a loss of \$2,536,580 recorded in the nine months ended September 30, 2018. The reduction is a result of higher revenue and the lower R&D expenditures mentioned above.

On a segmented basis, loss from operations attributed to the RF heating segment was 46% lower in Q3 2019 at \$550,511 compared to \$1,013,330 in Q3 2018, due to a 70% lower R&D expense stemming from increased government funding. Operating loss for RF heating was 22% higher in Q3 2019 compared to the loss of \$452,572

recorded in Q2 2019 due to higher R&D expenditures slightly offset by higher revenue in Q3 2019. HPC recorded an operating loss of \$52,589 in Q3 2019, compared to a loss of \$29,498 in Q3 2018 due to 31% lower revenue. HPC reported an operating loss in Q3 2019 compared to operating income of \$7,319 recorded in Q2 2019 on 14% lower revenue and higher G&A expenses.

For the nine months ended September 30, 2019, RF heating operating loss decreased 29% to \$1,599,052 from \$2,236,754 for the nine months ended September 30, 2018 due to a 68% lower R&D investment stemming from increased government funding. For the nine months ended September 30, 2019, HPC operating income was \$677,614 compared to an operating loss of \$285,596 for the nine months ended September 30, 2018 due to an 63% increase in revenue and 82% lower R&D expense due to reduced investment in seismic software product development.

#### <u>Revenue</u>

Revenue	Three months	Three months		% change	% change
	ended	ended	Three months	Q3 2019	Q3 2019
	September 30,	September 30,	ended	over	over
	2019	2018	June 30, 2019	ne 30, 2019 Q3 2018	
Software	\$ 18,799	\$ 5,496	\$ 13,847	242%	36%
Maintenance	175,966	145,203	171,625	21%	3%
Services	2,236	113,279	28,003	-98%	-92%
	\$ 197,001	\$ 263,978	\$ 213,475	-25%	-8%

During Q3 2019, the Company recognized revenue of \$197,001 representing a 25% decrease over the \$263,978 recognized during Q3 2018, due to lower HPC custom software services revenue. Revenue decreased 8% compared to the \$213,475 recognized in Q2 2019 also due to the 92% reduction in HPC custom software services revenue.

RF Heating Revenue	Three months	Three months		% change	% change
	ended	ended	Three months	Q2 2019	Q2 2019
	September 30,	September 30,	ended	over	over
	2019	2018	June 30, 2019	Q2 2018	Q1 2019
Software	\$ 14,350	\$ -	\$ -	N/A	N/A
Maintenance	1,575	-	2,250	N/A	-30%
Services	-	-	-	N/A	N/A
	\$ 15,925	\$ -	\$ 2,250	N/A	608%

The Company recognized RF heating revenue of \$15,925 in Q3 2019 compared to \$nil RF heating revenue in Q3 2018. The increase is due to software license revenue from the Company's AxHEAT RF heating simulation software. RF heating revenue was also lower in Q2 2019, for the same reason.

HPC Revenue	Thi	Three months		Three months			% change	% change
		ended		ended		ree months	Q3 2019	Q3 2019
	Sep	September 30,		September 30,		ended	over	over
		2019		2018		e 30, 2019 Q3 2018		Q2 2019
Software	\$	4,449	\$	5,496	\$	13,847	-19%	-68%
Maintenance		174,391		145,203		169,375	20%	3%
Services		2,236		113,279		28,003	-98%	-92%
	\$	181,076	\$	263,978	\$	211,225	-31%	-14%

HPC software revenue decreased 19% to \$4,449 in Q3 2019 compared to \$5,496 in Q3 2018 due to lower AxFDTD sales. HPC software revenue decreased 68% to \$4,449 in Q3 2019 compared to \$13,847 in Q2 2019, also due to a reduction in AxFDTD revenue. HPC maintenance revenue increased 20% from \$145,203 in Q3 2018 to \$174,391 in Q3 2019 due to increased AxFDTD maintenance and direct sales seismic imaging maintenance. HPC maintenance

revenue was 3% higher than the \$169,375 recorded in Q2 2019, also due to increased AxFDTD maintenance and direct sales seismic imaging maintenance. HPC services revenue fell 98% to \$2,236 in Q3 2019 compared to \$113,279 recognized in Q3 2018 due to the strategic decision to discontinue most HPC services offerings in 2018. HPC services revenue was 92% lower in Q3 2019 compared to \$28,003 in Q2 2019 when the Company recorded services revenue associated with software licenses.

Revenue			% change
			Nine months ended
	Nine	Nine	09/30/2019
	months	months	vs. Nine months
	ended	ended	ended 09/30/2018
	9/30/2019	9/30/2018	
Software	\$ 770,284	\$ 17,517	4297%
Maintenance	492,133	456,239	8%
Services	36,792	310,579	-88%
	\$ 1,299,209	\$ 784,335	66%

During the nine months ended September 30, 2019, the Company reported total revenues of \$1,299,209 a 66% increase compared to \$784,335 for the nine months ended September 30, 2018, due to increased seismic imaging software licenses resulting from the direct sales model. HPC services revenue fell 88% to \$36,792 in the nine months ended September 30, 2019 compared to \$310,579 recognized in the nine months ended September 30, 2018 due to the strategic decision to discontinue most HPC services offerings at the end of 2018.

RF Heating Revenue			% change
			Nine months ended
	Nine	Nine	09/30/2019
	months	months	vs. Nine months
	ended	ended	ended 09/30/2018
	9/30/2019	9/30/2018	
Software	\$ 14,350	\$ -	N/A
Maintenance	6,050	_	N/A
Services	-	-	N/A
	\$ 20,400	\$ -	N/A%

RF heating revenue increased to \$20,400 in the nine months ended September 30, 2019 compared to \$nil in the nine months ended September 30, 2018. The increase is due to software and maintenance revenue from the Company's AxHEAT RF heating simulation software.

HPC Revenue			% change
			Nine months ended
	Nine	Nine	09/30/2019
	months	months	vs. Nine months
	ended	ended	ended 09/30/2018
	9/30/2019	9/30/2018	
Product sales	\$ 755,934	\$ 17,517	4215%
Maintenance	486,083	456,239	7%
Consulting	36,792	310,579	-88%
	\$ 1,278,809	\$ 784,335	63%

HPC revenue increased 63% to \$1,278,809 in the nine months ended September 30, 2019 compared to \$784,335 in the nine months ended September 30, 2018 on higher seismic software revenue. HPC software revenue increased substantially to \$755,934 in the nine months ended September 30, 2019 compared to \$17,517 in the nine months ended September 30, 2018 due to large seismic imaging software licensing contracts delivered in the nine months ended September 30, 2019. HPC maintenance revenue increased slightly to \$486,083 in the nine months ended September 30, 2019 from \$456,239 in the nine months ended September 30, 2018. HPC services revenue was 88% lower in the nine months ended September 30, 2019 at \$36,792 compared to \$310,579 in the nine months ended September 30, 2018 due to the strategic decision to discontinue most HPC services offerings at the end of 2018.

#### **Expenses**

Expenses	Three months	Thre	Three months			% change	e	% change
	ended	ended		Three months		Q3 2019	)	Q3 2019
	September 30,	Septe	September 30,		ended	over		over
	2019	2	2018	June 30, 2019		June 30, 2019 Q3 2018		Q2 2019
Cost of revenue	\$ -	\$	22,282	\$	2,250	-100	%0	-100%
General & administrative	562,876		445,965		558,367	26	6%	1%
Research & development	237,225	838,559		98,111		-72	2%	142%
	\$ 800,101	\$	1,306,806	\$	658,728	-39	9%	21%

Expenses fell 39% during Q3 2019 to \$800,101 from \$1,306,806 in Q3 2018 principally due to lower R&D expense as a result of increased government funding. Expenses increased 21% from the \$658,728 recorded in Q2 2019 due to slightly higher G&A and higher R&D.

RF heating expenses	Three months	Three months		% change	% change
	ended	ended	Three months	Q3 2019	Q3 2019
	September 30,	September 30,	ended	over	over
	2019	2018	June 30, 2019	Q3 2018	Q2 2019
Cost of revenue	\$ -	\$ -	\$ -	N/A	N/A
General & administrative	353,640	298,704	391,707	18%	-10%
Research & development	212,796	714,626	63,115	-70%	237%
	\$ 566,436	\$ 1,013,330	\$ 454,822	-44%	25%

Expenses attributed to RF heating fell 44% to \$566,436 in Q3 2019, compared to \$1,013,330 in Q3 2018, and increased 25% compared to \$454,822 in Q2 2019. RF heating R&D expense fell 70% in Q3 2019 to \$212,796 from \$714,626 during Q3 2018 due to higher government assistance for R&D. Government assistance was \$202,847 in Q3 2019 compared to \$nil in Q3 2018. The increase in gross RF heating R&D expense in Q3 2018 compared to Q3 2019 is due to third party costs included in Q3 2018 related to the ramp-up of activity for the commercial-scale test of RF XL technology. RF heating R&D increased to \$212,796 in Q3 2019 compared to \$63,115 in Q2 2019 due to lower government assistance. RF heating G&A increased 18% to \$353,640 in Q3 2019 from \$298,704 in Q3 2018 due to higher salary and contractor expenses. RF heating G&A expenses decreased 10% in Q3 2019 compared to the \$391,707 recorded in Q2 2019.

HPC expenses	Three months		Three months			% change	% change
	ended		ended	Three months		Q3 2019	Q3 2019
	September 30,		September 30,		ended	over	over
	2019		2018	June 30, 2019		Q3 2018	Q2 2019
Cost of revenue	\$ -	\$	22,282	\$	2,250	-100%	-100%
General & administrative	209,236		147,261		166,660	42%	26%
Research & development	24,429		123,933		34,996	-80%	-30%
	\$ 233,665	\$	293,476	\$	203,906	-20%	15%

G&A expenses attributable to HPC increased 42% to \$209,236 from \$147,261 recorded in Q3 2018, due to higher salaries, consulting and marketing expenses. G&A increased 26% from \$166,660 in Q2 2019 also due to higher salary, contractor and marketing expenses. The Company completed an extensive relaunch of its website and associated marketing collateral in Q3 2019. R&D expenditures decreased 80% to \$24,429 in Q3 2019 from \$123,933 in Q3 2018 due to fewer software development staff. R&D decreased 30% compared to \$34,996 in Q2 2019 due to decreased contractor costs.

Expenses			% change
			Nine months
	Nine months	Nine months	ended
	ended	ended	9/30/2019
	9/30/2019	9/30/2018	over nine months
			ended 9/30/2018
Cost of revenue	\$ 2,853	\$ 52,219	-95%
General & administrative	1,732,081	1,512,355	15%
Research & development	485,712	1,742,111	-72%
	\$ 2,220,646	\$ 3,306,685	-33%

Expenses decreased 33% during the nine months ended September 30, 2019 to \$2,220,646 from \$3,306,685 for the nine months ended September 30, 2018. Cost of revenue for the nine months ended September 30, 2019 fell 95% to \$2,853 from \$52,219 in the nine months ended September 30, 2018 due to fewer technical staff engaged in custom software development. G&A expenses increased 15% in the nine months ended September 30, 2019 to \$1,732,081 compared to \$1,512,355 in the nine months ended September 30, 2018 primarily due to increased marketing, contractors and increased payroll expenses. R&D expenses fell 72% in the nine months ended September 30, 2019 to \$485,712 from \$1,742,111 in the nine months ended September 30, 2018. The reduction in R&D expense is a result of increased government funding for the field test of RF XL.

RF Heating Expenses			% change
			Nine months
	Nine months	Nine months	ended
	ended	ended	9/30/2019
	9/30/2019	9/30/2018	over nine months
			ended 9/30/2018
Cost of revenue	\$ -	\$ -	N/A
General & administrative	1,222,281	980,356	25%
Research & development	397,171	1,256,398	-68%
	\$ 1,619,452	\$ 2,236,754	-28%

RF heating G&A rose 25% to \$1,222,281 in the nine months ended September 30, 2019 from \$980,356 in the nine months ended September 30, 2018 due to an increase in marketing, consulting and payroll costs. RF heating R&D investment decreased 68% in the nine months ended September 30, 2019 to \$397,171 compared to \$1,256,398 in the nine months ended September 30, 2018 due to increased government funding for R&D. Government funding increased to \$945,206 in the nine months ended September 30, 2019 from \$4,500 in the nine months ended September 30, 2018. The decrease in gross R&D expense is a result of the ramp-up of activity associated with the Company's commercial-scale test of RF XL in Q3 2018.

HPC Expenses			% change
			Nine months
	Nine months	Nine months	ended
	ended	ended	9/30/2019
	9/30/2019	9/30/2018	over nine months
			ended 9/30/2018

Cost of revenue	\$ 2,853	\$ 52,219	-95%
General & administrative	509,800	531,999	-4%
Research & development	88,541	485,713	-82%
	\$ 601,194	\$ 1,069,931	-44%

HPC cost of revenue for the nine months ended September 30, 2019 decreased 95% to \$2,853 compared to \$52,219 in the nine months ended September 30, 2018, due to reduced personnel costs associated with custom software development projects. HPC G&A decreased 4% to \$509,800 in the nine months ended September 30, 2019 from \$531,999 in the nine months ended September 30, 2018. HPC R&D investment decreased 82% in the nine months ended September 30, 2019 to \$88,541 compared to \$485,713 in the nine months ended September 30, 2018 due to reduced development staff.

#### **Liquidity and Capital Resources**

At September 30, 2019, Acceleware had working capital of \$1,526,072 (December 31, 2018 – \$2,051,577), \$4,228,942 (December 31, 2018 - \$3,225,126) in cash and cash equivalents, and \$190,403 (December 31, 2018 - \$189,012) in combined short-term and long-term debt in the form of leases. The increase in short-term and long-term lease obligations reflects the adoption of IFRS 16 on January 1, 2019. The increase in cash is a result of increased collection of trade receivables and receipt of government assistance milestone funding for the RF XL field test.

The Company actively manages its cash flow and investment in new products to match its cash requirements to cash generated from operations, external funding, and capital raising activities. In order to maximize cash generated from operations, the Company plans to continue to focus on high gross margin software products marketed through a combination of direct and reseller models; to minimize operating expenses where possible; and to limit capital expenditure. As the Company continues to develop its RF heating technology, new research and development investments will be financed through a combination of internal cash flow from the high-performance computing business, project funding agreements, government assistance and external financing. Management believes that successful execution of its business plan will result in sufficient cash flow and new financing to fund projected operational and investment requirements. However, no assurances can be given that the Company will be able to achieve all or part of the objectives discussed above, or that sufficient financing from outside sources will be available. Further, if the Company's operations are unable to generate cash flow levels at or above current projections, the Company may not have sufficient funds to meet its obligations over the next twelve months. Should such events occur, Management is committed to implementing all or a portion of its contingency plan. This plan has been developed and designed to provide additional cash flow, and includes, but is not limited to, deferring certain additional product development initiatives, reducing sales, marketing and general and administrative expenses, and seeking outside financing. The failure of the Company to achieve one or all of the above items may have a material adverse impact on the Company's financial position, results of financial performance and cash flows.\*

Cash flow used in operations totaled \$478,372 for the three months ended September 30, 2019, compared to cash used of \$551,816 for the three months ended September 30, 2018. Cash used in operations before changes in non-cash working capital decreased to \$390,523 in Q3 2019 compared to cash used of \$899,831 in Q3 2018, due to payments received for government assistance. During the nine months ended September 30, 2019 cash generated in operations increased to \$1,072,883 from cash used of \$1,405,198 in the nine months ended September 30, 2018, due to higher revenue and the resulting collections of trade receivables, and payments received for government assistance.

<sup>\*</sup> this paragraph contains forward looking information. Please refer to "Forward Looking Statements" and "Risk Factors and Uncertainties" for a discussion of the risks and uncertainties related to such information

#### Trade and Other Receivables

Trade and other receivables as at September 30, 2019 decreased to \$1,212,210, compared to \$1,397,786 as at December 31, 2018. The Company maintains close contact with its customers to mitigate risk in the collection of receivables.

#### Alberta SR&ED Tax Credits

The Company has recorded \$135,173 (December 31, 2018 - \$227,311) in SR&ED tax credit receivables as at September 30, 2019. The decrease is a result of timing of receipt of payment for the 2018 tax credit.

#### **Current Liabilities**

As at September 30, 2019, the Company had current liabilities of \$4,243,005 compared to current liabilities of \$3,918,182 as at December 31, 2018. The increase in current liabilities is due to higher deferred government assistance for R&D.

## **Investing Activities**

For the nine months ended September 30, 2019, \$2,846 was invested in property and equipment compared to \$nil for the nine months ended September 30, 2018.

#### Financing Activities

During the nine months ended September 30, 2019, 1,484,000 stock options (nine months ended September 30, 2018 – 677,296 stock options and 4,030,896 warrants) were exercised for cash proceeds of \$74,200 (nine months ended September 30, 2018 - \$963,761).

#### Income Tax

The Company follows the liability method with respect to accounting for income taxes. Deferred tax assets and liabilities are determined based on differences between the carrying amount and the tax basis of assets and liabilities (temporary differences). Deferred tax assets and liabilities are measured using the substantively enacted tax rates that will be in effect when these differences are expected to reverse. Deferred tax assets, if any, are recognized only to the extent that, in the opinion of Management, it is probable that the assets will be realized.

With the exception of the refundable Alberta SR&ED tax credits, as at September 30, 2019, the potential tax benefits of Acceleware's available tax pools have not been recognized in the Company's account due to uncertainty surrounding the realization of such benefits.

#### Risks Factors and Uncertainties

There have been no material changes in any risks or uncertainties facing the Company since December 31, 2018. A discussion of risks affecting the Company and its business is set forth under the heading Risk Factors and Uncertainties in Management's Discussion and Analysis for the period ended December 31, 2018.

#### **Transactions with Related Parties**

For the three months ended September 30, 2019, the Company incurred expenses in the amount of \$43,750 (three months ended September 30, 2018 - \$41,250) and \$130,667 for the nine months ended September 30, 2019 (nine months ended September 30, 2018 - \$123,750) with a company controlled by an officer of the Company as fees for duties performed in managing operations, and this amount is included in research and development expense. As at September 30, 2019, \$15,082 was included in accounts payable and accrued liabilities (December 31, 2018 - \$172,719). These fees were incurred in the normal course of operations and in the opinion of Management represent fair value for services rendered.

For the three months ended September 30, 2019, the Company incurred expenses in the amount of \$2,253 (three months ended September 30, 2018 - \$599) and \$23,151 for the nine months ended September 30, 2019 (nine months ended September 30, 2018- \$15,454) with a company controlled by a director of the Company for legal fees, and this amount is included in general and administrative expense. As at September 30, 2019, \$98 was included in accounts payable and accrued liabilities (December 31, 2018 - \$2,179). These fees were incurred in the normal course of operations and in the opinion of Management represent fair value for services rendered.

For the three months ended September 30, 2019, the Company incurred expenses in the amount of \$23,750 (three months ended September 30, 2018 - \$2,900) and \$66,300 for the nine months ended September 30, 2019 (nine months ended September 30, 2018 - \$11,350) with a company controlled by the spouse of an officer of the Company for communications services, and this amount is included in general and administrative expense. As at September 30, 2019, \$6,825 was included in accounts payable and accrued liabilities (December 31, 2018 - \$2,415). These fees were incurred in the normal course of operations and in the opinion of Management represent fair value for services rendered

For the three months ended September 30, 2019, the Company incurred expenses in the amount of \$16,958 (three months ended September 30, 2018 - \$nil) and \$58,553 for the nine months ended September 30, 2019 (nine months ended September 30, 2018 - \$nil) with a company controlled by an officer of the Company as fees for duties performed in financial reporting services, and this amount is included in general and administrative expense. As at September 30, 2019, \$nil was included in accounts payable and accrued liabilities (December 31, 2018 - \$nil). These fees were incurred in the normal course of operations and in the opinion of Management represent fair value for services rendered.

Key management includes the Company's directors and members of the executive management team. Compensation awarded to key management included:

	Three months ended September 30,	Three months ended September 30,	Nine months ended September 30,	Nine months ended September 30,
	2019	2018	2019	2018
Salaries and short-term employee				
benefits	\$ 208,275	\$ 174,247	\$ 840,819	\$ 522,503
Share-based payments	76,159	91,939	254,371	309,894
	\$ 284,434	\$ 266,186	\$ 1,095,190	\$ 832,397

#### **Critical Accounting Estimates**

#### General

The Management's Discussion and Analysis for the year ended December 31, 2018 outlined critical accounting policies including key estimates and assumptions that Management has made under these policies and how they affect the amounts reported in the financial statements. During the quarter, there have been no material changes in Management's key estimates and assumptions and except for the adoption of IFRS 16, the significant accounting policies used in the preparation of the condensed interim financial statements are unchanged from those disclosed in the Company's financial statements for the year ended December 31, 2018.

# New standards and interpretations adopted

IFRS 16, Leases ("IFRS 16"). The Company adopted IFRS 16 using the modified retrospective approach and accordingly the information presented for 2018 has not been restated. It remains as previously reported under IAS 17 and related interpretations. On initial application, the Company has elected to record right-of-use assets based on the corresponding lease liability, adjusted by the amount of any prepaid or accrued lease payments. IFRS 16 specifies

how leases will be recognized, measured, presented and disclosed and it provides a single lessee model, requiring lessees to recognize right-of-use assets and lease liabilities for all major leases.

The impact of the transition to IFRS 16 is shown in Note 10 of the Company's financial statements for the three and nine months ended September 30, 2019.

The Company's accounting policy under IFRS 16 is as follows: At inception of a contract, Acceleware assesses whether a contract is, or contains, a lease based on whether the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. For contracts that contain a lease component, Acceleware then recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured based on the initial amount of the lease liability adjusted for:

- Initial direct costs incurred by Acceleware;
- Lease payments made prior to inception;
- Estimated costs to dismantle, remove or restore the asset(s); less
- Any lease incentives received.

Lease assets are depreciated to the earlier of the end of the useful life of the right-of-use asset or the lease term using the straight-line method as this most closely reflects the expected pattern of consumption of the future economic benefits. The lease term includes periods covered by an option to extend if Acceleware is reasonably certain to exercise that option. In addition, the right-of-use asset can be periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Company's incremental borrowing rate. Generally, Acceleware uses its incremental borrowing rate as the discount rate for leases for the right to use office space, and uses the interest rate implicit in the lease for leases of the right to use computer equipment.

The lease liability is measured at amortized cost using the effective interest method. Acceleware will remeasure the lease liability when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Acceleware's estimate of the amount expected to be payable under a residual value guarantee, or if Acceleware changes its assessment of whether it will exercise a purchase, extension or termination option. When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero. Acceleware has elected to apply the practical expedient not to recognize right-of-use assets and lease liabilities for short-term (12 months or less) leases of all asset classes. Acceleware will elect to apply the practical expedient not to recognize right-of-use assets and lease liabilities for leases of low value (less than \$5,000) assets on a case-by-case basis. The lease payments associated with either short-term leases or leases of low-value underlying assets are recognized as an expense on a straight-line basis over the lease term.

#### **Financial Instruments and Other Instruments**

The Company's only financial instruments are the monetary assets and liabilities appearing on its statement of financial position.

# **Disclosure of Outstanding Share Data**

As of the date of this MD&A, Acceleware had the following common shares, options and warrants outstanding:

Common Shares	104,611,670
Stock Options	9,866,824
Warrants	nil

# Additional Disclosure for Venture Issuers Without Significant Revenue

Additional disclosure concerning the Company's research and development expenses and general and administrative expenses is provided in the unaudited financial statements for September 30, 2019 that are available on <a href="https://www.sedar.com">www.sedar.com</a> and as noted below.

Research and Development	Three months ended September 30, 2019	Three months ended September 30, 2018			
Salaries	\$ 151,950	\$ 314,282			
Consulting	182,175	471,547			
R&D lab supplies	64,475	9,891			
Share-based payments	39,416	39,759			
Rent and overhead allocations	10,470	21,941			
Amortization	24,246	12,529			
Government assistance	(202,847)	-			
Alberta SR&ED Tax Credits	(32,659)	(31,390)			
Total	\$ 237,225	\$ 838,559			

Sales, General and Administration	Three months ended	Three months ended			
	<b>September 30, 2019</b>	September 30, 2018			
Salaries	\$ 208,949	\$ 172,091			
Marketing	58,322	23,540			
Travel	466	8,306			
Share-based payments	70,289	86,644			
Rent, supplies and public company fees	73,770	69,072			
Amortization	24,247	12,529			
Professional fees	126,833	73,783			
Total	\$ 562,876	\$ 445,965			