## ACCELEWARE LTD. MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE THREE AND TWELVE MONTHS ENDED DECEMBER 31, 2021

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") audited financial statements and the accompanying notes for the year ended December 31, 2021, which were prepared in accordance with International Financial Reporting Standards ("IFRS"). Additional information relating to the Company is available on the System for Electronic Document Analysis and Retrieval ("SEDAR") at www.sedar.com under Acceleware Ltd.

This MD&A is presented as of March 22, 2022. 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 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;
- potential benefits of the Company's software to customers, including cost savings and increases to cash flow and productivity;
- the lasting impact on local and global markets of the COVID-19 pandemic;
- oil and natural gas production levels of both Organization of Petroleum Exporting Countries ("OPEC") and non-OPEC countries;
- oil and natural gas commodity prices;
- 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 industry and government interest in reducing greenhouse gas ("GHG") emissions, reducing industrial water use, and minimizing land disturbance remains constant or increases;
- that the long-term impact of the COVID-19 pandemic on the Company's products and services and R&D efforts will be manageable;
- that the long-term oil and natural gas commodity price trend and its effect on the Company's products, services, and R&D efforts will be manageable;
- that the long-term effect of any sentiment, law or policy regarding future investment in new heavy oil or oil sands projects will be manageable;
- that the 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 maintain all regulatory approvals required to carry out the commercial-scale testing of its RF heating technology at Marwayne, Alberta (the "RF XL Pilot");
- that the RF Heating concepts developed by the Company are unique, novel and non-infringing of intellectual property owned by others;
- that the Company will be able to maintain sales of its software products and services 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 the Company 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.

### **BUSINESS OVERVIEW**

Acceleware is an innovator of transformative technologies leading to a new era of responsible and cost-effective energy development focused within two business segments: radio frequency heating ("RF Heating") for enhanced oil recovery and high-performance computing ("HPC") scientific software.

RF XL is Acceleware's patented RF heating technology, designed to improve the extraction of heavy oil and bitumen, featuring a cost effective and environmentally friendly alternative to steam assisted gravity drainage ("SAGD"). When applied, RF XL has the potential to reduce both capital and operating costs, while offering significant environmental benefits, including:

- immediate GHG emission reductions;
- the elimination of external water use;
- a substantial decrease in land use;
- no requirement for solvents; and
- substantial elimination of water treatment facilities and no need for tailings ponds.

The Company believes that RF XL electrification can provide a clear pathway to low-to-zero GHG production of heavy oil and oil sands and provide optimal alignment between industry and government to recognize innovation as a meaningful component of 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 clients' electronic and medical product development needs with state-of-the-art electro-magnetic ("EM") simulation software.

### RF Heating for Enhanced Oil Recovery

Acceleware's RF heating technology broadly falls into two distinct use-cases:

- 1. RF XL targets long horizontal wells most often associated with in-situ oil sands production.
- 2. Modular RF is technology primarily aimed at deeper, vertical wells where efficiencies can be gained due to the innovative approach offered by downhole RF power generation.



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.

<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.

In 2010, Acceleware began investigating technology that would use RF energy for in-situ heating of heavy oil and bitumen. Since then, Acceleware has vigorously developed RF heating technology, securing the intellectual property with patents where appropriate.

Through the Company's RF heating development and services business, Acceleware developed sophisticated simulation software tools based on its proprietary AxFDTD solution coupled with third party reservoir simulation software. In late 2013, Acceleware commercialized and introduced these simulation tools as  $AxHEAT^{TM}$ , a product aimed at oil and gas companies that are investigating the effectiveness of RF heating to increase the efficiency of heavy oil and oil sands production.<sup>\*</sup>

RF heating for oil production is not a new concept, as failed trials were conducted in Russia and North America as far back as 1948. Acceleware believes that these early failures were a result of technology limitations imposed by adapting radio communications technology for RF heating. Acceleware believes these limitations can be overcome with an entirely new approach to RF heating technology. The Company's RF heating R&D efforts have focused on reducing the capital cost of the technology, increasing its efficiency and therefore reducing its operating cost, and improving its scalability to be conducive for very long horizontal wells commonly used in Alberta's oil sands, as well as in Latin America, Africa, Asia, the Middle East and elsewhere. Acceleware's unique expertise with RF heating technology has resulted in the generation of revenue both locally and abroad.

### High-Performance Computing Software

Acceleware's traditional high performance computing market has been centered around EM simulation software, and the Company continues to provide products to this industry. Its first software commercialized was an accelerated finite difference time domain ("FDTD") solution for the EM simulation industry. AxFDTD™ 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 graphics processing unit ("GPU") computing revolution as most of the major mobile telephone manufacturers in the world are using Acceleware's EM design solutions which facilitate more rapid design of their products. Acceleware's fourth-generation software acceleration solutions, which support multi-board GPU systems, can accelerate entire industrial simulation and processing applications by more than 35 times.



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

In the EM market, software developers choose to partner with Acceleware to increase the speed of their software. Such partners currently include SPEAG, ZMT Zurich MedTech and Keysight Technologies. Acceleware reaches the EM market through a combination of partner channels and direct sales. Investment in AxFDTD continues for traditional markets because it is an enabling technology for AxHEAT.

Acceleware recognized the similarity between EM FDTD and certain seismic imaging algorithms, which led the Company to enter the seismic imaging market in 2008. The Company's first product was a GPU accelerated Kirchhoff

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Time Migration solution, followed closely by AxRTM<sup>™</sup> in 2009, a central processing unit ("CPU") and GPU enabled Reverse Time Migration ("RTM") library.

In 2013, Acceleware introduced AxWave<sup>™</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. Beginning in 2019, Acceleware accesses the oil and gas geoscience software market with innovative licensing structures through a direct sales model that targets oil and gas exploration companies and seismic service providers.



Seismic forward modelling in complex subsurface geology using AxWave

In February 2004, Acceleware was founded by a group of graduate students and professors from the University of Calgary's Electrical Engineering department for the purpose of building software solutions that targeted the GPU as a compute platform. Since 2006, Acceleware's common shares have been listed on the TSX Venture Exchange (symbol: AXE). Acceleware is headquartered in Calgary, Alberta.

On December 31, 2021, Acceleware had 19 employees and long-term contractors, including four in administration; three in sales, marketing and product management; and twelve in R&D and engineering.

For further information about the Company, please visit <u>www.acceleware.com</u>.

## **OPERATING SUMMARY**

The commercial-scale RF XL pilot project at Marwayne, Alberta (the "RF XL Pilot") is the final step before commercialization of the Company's patent-protected Clean Tech Inverter ("CTI"), a novel electrification "engine" for industrial heating, first applied in the extraction of heavy oil and oil sands. Acceleware believes the CTI can economically decarbonize many industry verticals through electrification with immediate application in the clean energy transition. Functionality of the CTI has already been proved through scaled field tests conducted in 2019 and 2020, and when combined with existing heating systems and an immediate appetite within industry to adopt a clean technology, can facilitate an economic decarbonization strategy for many organizations.

The drilling and completions program for the RF XL Pilot was finished during Q4 2021 and facilities installation followed and was complete in the first quarter of 2022. As of March 2022, Acceleware announced that heating had commenced, and as such the RF XL Pilot entered into the final milestone.

In addition, the Company achieved the following highlights in the last twelve months:

- CEO, Geoff Clark, received Canada's Clean-50 Award;
- A third major oil sands producer signed-on as a consortium member of the RF XL Pilot and committed up to \$2 million in funding and technical expertise;
- Jim Boucher was elected to the board of directors;
- Alberta Innovates granted new funding of \$5 million for the RF XL Pilot at our site in the Cold Lake Oil Sands region near the town of Marwayne, Alberta; and
- A second major oil sands producer committed up to \$2 million in funding to support of the RF XL Pilot.

On March 1, 2022, the Company launched a non-brokered private placement of 10% unsecured convertible debentures due 2026 for approximate gross proceeds of \$1,500,000. Each debenture matures four years after the issue date and is convertible into units of the Company at a conversion price of \$0.80. Each unit consists of one common share and one-half of one common share purchase warrant. Each whole warrant entitles the holder to acquire one common share, at an exercise price equal to 200% of the conversion price of the debentures for a 24-month period following the distribution of the debentures. Net proceeds from the offering shall be used to fund the further development and testing of the Company's RF heating technology and for general corporate purposes. The Company expects to close the private placement no later than April 15, 2022.

Acceleware estimates the net cost to construct and operate the RF XL Pilot for six months to be in the range of \$21 million to \$22 million. These costs are net of an estimated \$2 million to \$3 million from the sale of produced oil. While construction costs have increased due to delays caused by COVID-19, supply chain disruptions, an extended drilling and completions program, and weather-related issues, the Company now also estimates a meaningful contribution from the sale of oil production. The majority of construction costs had been incurred as at December 31, 2021, while, operating cost estimates remain subject to fluctuating commodity prices, in particular electricity. There is also uncertainty in estimated proceeds from the sale of produced oil due to fluctuating oil prices and simulated production volumes. As of December 31, 2021, total direct funding committed to the RF XL Pilot included \$5 million from Alberta Innovates, \$5.5 million from Sustainable Development Technology Canada ("SDTC"), \$5 million from Emissions Reduction Alberta ("ERA"), and \$6 million from three major oil sands producers. \*

All three consortium members of the RF XL Pilot have committed up to \$2 million in funding and technical expertise. In exchange for this funding, Acceleware will provide exclusive access to detailed technical data and test results, prioritized rights to host a subsequent test, preferred pricing on pre-commercial products and preferred access to RF XL products. Acceleware's three oil sands partners now represent well over one million barrels of oil sands and heavy oil production per day and a commitment of up to \$6 million of funding.

<sup>&</sup>lt;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

**Project Update:** As noted above, the RF XL Pilot is in the initial heating phase. The RF XL Pilot drilling and completions program began in August 2021, beginning with producer well spud, and culminating in producer well completion in December 2021. Facilities construction commenced in December 2021, and included the installation of power lines, electrical house (e-house), and production components. Installation of remaining electrical and monitoring components for the heating well, final facility commissioning, and energization of the site was completed in January and February 2022. Commissioning of the e-house, including low- and high-voltage testing of the CTI as well as various control systems was also completed.

A power ramp-up phase has been designed for the initial RF XL heating period, where Acceleware plans to gradually increase power, pause heating intermittently to evaluate performance, and test the RF XL system as required. The team will use data from this initial phase to optimize operations, establish an operating baseline for the system, and identify design enhancements for future deployments. The data will also be used to refine the operating plan, going forward. Oil production capabilities resulting from heating will also be assessed.

While the RF XL heating phase is planned for approximately six months, this period may be extended to allow Acceleware to capture additional information on the efficiency and operation of the technology. If proven successful, the Pilot will mark a world first for electrification of low-to-zero GHG heavy oil and oil sands production using RF energy. With a successful Pilot and subsequent commercialization, numerous potential environmental benefits could be realized by oil sands producers deploying RF XL, and the Company anticipates highly skilled job creation as well as skilled jobs transition opportunities, including jobs for Indigenous peoples. \*



There are 11 patents granted or allowed to protect various proprietary technologies related to Acceleware's RF Heating R&D, and 28 patent applications pending or under development. The Company continues to work closely with the patent offices and its intellectual property advisors.

Acceleware also continues to focus on driving external awareness of the Company and on positioning its RF Heating and CTI technology more prominently within both the oil and gas and clean-tech communities. Several new blog posts and videos have been released via social media recently which feature discussions on the RF Heating technology by Acceleware's engineering team. The collection of videos is available for viewing here: <u>Acceleware Vlog Posts</u>.

# **FINANCIAL SUMMARY**

R&D spending has increased significantly, in lockstep with completion of the drilling program and the purchase and manufacture of surface and sub-surface components. Cumulative RF XL Pilot expenses as at December 31, 2021 were approximately \$20.4 million (December 31, 2020 - \$7.6 million). The remaining cash committed but not yet

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received from SDTC, ERA and Alberta Innovates, including holdbacks receivable was \$2.9 million as at December 31, 2021 (December 31, 2020 – \$4.2 million) and amounts committed but not yet received from three major oil-sands producers were \$2.8 million as at December 31, 2021 (December 31, 2020 – \$3.2 million).

Acceleware has undertaken rapid and effective response measures to protect against the impacts of COVID-19 following government restrictions that were imposed to control the spread of the virus. Since the onset of the pandemic, the Company's priority has remained the health and safety of its staff, clients, partners and other stakeholders. Acceleware implemented modified work practices, staggered work hours as needed, and introduced physical distancing and work-from-home protocols to meet all appropriate health and safety standards. The Company is pleased to report that transitioning its workforce to remote working environments has resulted in minimal productivity disruption. For the periods where Acceleware met eligibility criteria for the Canada Emergency Wage Subsidy ("CEWS") and the Canada Emergency Rent Subsidy ("CERS"), the Company applied for and received cumulative payments of \$0.5 million as at December 31, 2021.

The Company had also implemented several operational responses to address (1) the potential for increased costs for materials and services, (2) tempered access to capital and funding from the oil and gas industry and public markets and (3) a temporary decline in demand for certain software used in the oil and gas industry, including: the successful application for additional government funding, reduced reliance on international suppliers by sourcing from Canadian companies, engagement with a broader group of funders, increased and cost efficient communications with stakeholders regarding progress and technology, reduced travel and entertainment and other discretionary spending, and flexible terms of engagement with contractors and employees.

### YEAR TO DATE IN REVIEW

Revenue of \$0.8 million was generated from the Company's software, maintenance and services revenue streams for the year ended December 31, 2021 compared to \$0.9 million for the year ended December 31, 2020. The lower revenue in the year ended December 31, 2021 compared to the year ended December 31, 2020 is due to recognition of a large HPC contract in 2020. In addition to recognized revenue, Acceleware has also received non-refundable milestone cash payments of \$2.4 million for the year ended December 31, 2021 (December 31, 2020 – \$0.3 million) which are recorded in deferred revenue. Data revenue equal to the amount recorded in deferred revenue will be recognized as revenue at the end of the RF XL Pilot or when the data contracts are terminated, whichever is earlier. Total deferred revenue recorded on the statement of financial position as at December 31, 2021 is \$3.05 million (December 31, 2020 – \$0.75 million).

Total comprehensive loss for the year ended December 31, 2021 was \$4.1 million compared to \$2.1 million for the year ended December 31, 2020 due to higher R&D spending for the RF XL Pilot.

Gross R&D expenses for the year ended December 31, 2021 were \$12.6 million compared to \$2.5 million incurred during the year ended December 31, 2020 due to increased R&D activity noted above. Federal and provincial government assistance of \$9.6 million was recognized in the year ended December 31, 2021 compared to \$1.5 million for the year ended December 31, 2020.

G&A expenses incurred during the year ended December 31, 2021 were \$1.8 million compared to \$2.1 million for the year ended December 31, 2020 a decrease of \$0.3 million due primarily to lower payroll and payroll related costs. The Company continues to prioritize cost management.

As at December 31, 2021, Acceleware had negative working capital of \$0.9 million (December 31, 2020 – positive working capital of \$0.03 million) including cash and cash equivalents of \$1.9 million (December 31, 2020 – \$1.9 million). The decrease in working capital is attributable to timing of receipt of funding and higher R&D spending for the RF XL Pilot. Increasing the deficit is deferred revenue of \$3,050,000 as at December 31, 2021 (December 31, 2020 – \$750,000). Despite receiving non-refundable cash payments for these amounts, the milestone payments have not met all requirements for revenue recognition under IFRS 15 Revenue from Contracts with Customers. These amounts will be recognized as revenue and increase shareholders' equity when RF XL Pilot heating is complete or the data revenue contracts are terminated, whichever is earlier.

In the interests of matching cash requirements with a combination of cash generated from operations, external funding, and capital raising activities, the Company actively manages its cash flow and investments in new products. Acceleware intends to maximize cash generated from operations through several initiatives which include continuing to focus on higher gross margin software products that are marketed through a combination of direct and reseller models; minimizing operating expenses where possible; and limiting capital expenditures. As the Company continues to develop its RF Heating technology, new R&D investments will be financed through a combination of internal cash flow from the HPC business, project funding agreements, government assistance and external financing, when available.\*

## QUARTER IN REVIEW

Revenue of \$0.1 million was generated in the three months ended December 31, 2021 ("Q4 2021") compared to \$0.1 million in the three months ended December 31, 2020 ("Q4 2020"). Revenue of \$0.3 million was generated in the previous quarter ended September 30, 2021 ("Q3 2021"). Revenue is attributable to software, maintenance and services with the largest amount attributable to software. Higher revenue in Q3 2021 compared with Q4 2021 and Q4 2020 is attributable to a significant contract in the HPC segment and sales of RF simulation services within the RF Heating segment.

Total comprehensive loss for Q4 2021 was \$1.8 million compared to a comprehensive loss of \$1.0 million for Q4 2020 and a comprehensive loss of \$1.1 million for Q3 2021. The higher comprehensive loss in Q4 2021 compared to Q4 2020 and Q3 2021 is due to an increase in spending for R&D on the RF XL Pilot in Q4 2021.

Gross R&D expenses incurred in Q4 2021 were \$5.2 million compared to gross R&D expenses in Q4 2020 of \$0.8 million and \$4.0 million in Q3 2021. The increase in Q4 2021 and Q3 2021 over Q4 2020 is due to significant investment in the RF XL Pilot activities in 2021. During Q4 2021, a significant portion of the drilling activity was completed, and the majority of surface and sub-surface components were manufactured and received. Federal and provincial government assistance of \$3.9 million was recognized in Q4 2021 compared to \$0.5 million in Q4 2020 and \$3.0 million in Q3 2021, offsetting gross research and development costs.

General and administrative ("G&A") expenses incurred in Q4 2021 were \$0.5 million compared to \$0.7 million in Q4 2020 and \$0.4 million in Q3 2021. The Company continues to prioritize cost control given uncertain economic conditions.

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.

## STRATEGIC UPDATE

Acceleware will continue to focus on the energy markets, with RF Heating, AxRTM, AxWave, AxFWI, and AxHEAT as the primary strategic revenue-generating and investment technologies. Innovations and improvements to AxFDTD will continue for the EM markets and be an enabling technology for AxHEAT in the energy market. Acceleware has a proven track record for successful development and commercialization of revolutionary technologies.

The Company believes that its RF Heating technology presents significant potential environmental and economic benefits for the oil industry. Acceleware has been able to continue to fund the development of RF XL through non-refundable government funding and industry contributions, supplemented by financing activities such as the non-brokered private placement announced in Q1, 2022 and mentioned above. However, the unprecedented impact of COVID-19 and measures taken by governments and companies to contain its spread, and investor sentiment may affect the Company's ability to raise additional funding for the final stages of the RF XL Pilot, should further funding be required. A further delay in the testing program may result in additional costs and a delay in technology commercialization. To mitigate these risks, the Company plans to prioritize the RF Heating segment by concentrating capital allocation and resources deployment to it and maintain its cost containment efforts.

### <u>RF Heating</u>

In 2010, Acceleware began investigating technology that would use RF energy for in-situ heating of heavy oil and bitumen. In each of the four years immediately prior to 2017, the Company received funding from NRC-IRAP to partially finance its RF Heating technology development. In 2018, the Company began preparation for the RF XL Pilot, which will use two megawatts of electricity with an 800m horizontal well.



RFXL HEATING Schematic of the RF XL Pilot

Since 2017, Acceleware has been awarded a \$5.5 million non-repayable contribution from SDTC, a \$5 million non-repayable contribution from Alberta Innovates in accordance with their mandates to bring to market clean technologies that are economically viable and reduce GHG emissions. As at December 31, 2021, Acceleware has raised a further \$6 million in funding for its RF XL Pilot from three major oil sands producers. The Company continues to pursue partnerships with oil sands and heavy oil producers to not only provide additional financial and technical support for this commercial-scale field test but to also to pave the way for continued commercialization after the completion of the RF XL Pilot at Marwayne.

Acceleware, with partner GE, completed the design, manufacturing, and factory testing of the prototype Acceleware CTI which is the electronic platform for RF XL. In late 2019, the prototype CTI was field tested at the Company's simulated "ditch" reservoir in Alberta with record-level results and has now been deployed in the RF XL Pilot. Acceleware retains all intellectual property rights to the CTI design.

In early 2020, Acceleware received approval from its core funders for the partnership with Broadview to host the RF XL Pilot on their site near Marwayne, Alberta. In October 2020, the Company received approval of its Experiment Recovery Scheme Application under the Oil Sands Conservation Act from the AER for the RF XL Pilot, and in December 2020 received approval for its application under the Environmental Protection and Enhancement Act. Upon receipt

of these regulatory approvals, Acceleware commenced RF XL Pilot activity in earnest in 2021, completing the drilling and completions program, constructing surface facilities, and starting facilities installation.

## <u>HPC</u>

In 2019, the Company focused on selling seismic imaging software to the oil and gas exploration market and continued the development of its suite of seismic products, as well as adding features, functionality, and performance to AxRTM, AxWave and AxFWI. Since 2018, the Company has accessed the oil and gas geoscience software market with innovative licensing structures through a direct sales model.

The Company continues to develop AxRTM, AxWave and AxFWI, which are GPU-accelerated and CPU-optimized seismic solutions, providing a multi-fold performance increase over alternative solutions, resulting in reduced processing times and enabling expedited drilling decisions for the oil and gas industry.

While the Company is focusing on energy markets, it continues to develop and sell its EM FDTD solution to end users primarily through independent software vendors ("ISV") that have integrated Acceleware's solution into their software architecture. 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. Acceleware's key ISV partners include SPEAG, ZMT Zurich MedTech AG, Keysight Technologies, Synopsis, Inc., and Crosslight Software Inc.

## **SELECTED ANNUAL INFORMATION**

The audited financial statements and the accompanying notes for the year ended December 31, 2021 (the "Financial Statements") are incorporated by reference herein and form an integral part of this MD&A. The Financial Statements can be found on <u>www.sedar.com</u> and on the Company's website at https://acceleware.com/. All financial information is reported in Canadian dollars unless otherwise noted.

The following table shows selected financial information from Acceleware's audited annual financial statements for the years ended December 31, 2021, December 31, 2020, and December 31, 2019.

	Year Ended Dec 31, 2020 (Audited)	Year Ended Dec 31, 2020 (Audited)	Year Ended Dec 31, 2019 (Audited)
Total revenue	\$752,770	\$899,281	\$1,453,924
Total comprehensive loss	(\$4,079,593)	(\$2,099,653)	(\$1,558,810)
Loss per share (basic and diluted)	(\$0.04)	(\$0.02)	(\$0.02)
Total assets	\$5,352,188	\$3,855,050	\$6,514,914
Long-term debt (in the form of finance leases) <sup>1</sup>	\$121,654	\$173,932	\$155,335
Dividends	Nil	Nil	Nil

<sup>1</sup> Includes current portion of finance leases

Revenue is lower at December 31, 2021 and 2020 compared to December 31, 2019 due to lower maintenance revenue for contracts that ended in 2019, lower demand for seismic imaging software in a relatively weaker oil and gas sector and lower services revenue after discontinuing certain consulting services in 2019, all exacerbated by the global COVID-19 pandemic. Management expects revenues to experience significant fluctuations due to the software revenue model, with fewer overall sales transactions at higher overall revenue per transaction, which could potentially lead to increased volatility in revenue. Total comprehensive loss was also significantly higher in 2021 compared to both 2020 and 2019 due to increasing RF XL Pilot expenditures and increasing deferred revenue. Total assets have fluctuated over the three years and is attributable to R&D spending for the Pilot and the timing of receipt of funding milestone payments.

### **RESULTS OF OPERATIONS – YEAR ENDED DECEMBER 31, 2021**

Revenue	Year ended		ar ended	% change	
	December 31, 2021		ber 31, 2020	2021	
	-			over 2020	
Software	\$ 336,588	\$	628,833	-46%	
Maintenance	342,523		270,448	27%	
Services	73,659		-	N/A	
	\$ 752,770	\$	899,281	-16%	

The Company recognized revenue of \$752,770 in the year ended December 31, 2021, a 16% decrease over the year December 31, 2020 primarily due to lower HPC software revenue for a significant revenue contract recognized in 2020 partially offset by an increase in demand for software in the oil and gas sector in 2021 compared to early 2020. Services revenue was higher for the year ended December 31, 2021, reflecting RF simulation services, a relatively new revenue stream attributable to customers' interest in applying RF XL to specific reservoirs and operations. The majority of HPC Service offerings were discontinued in 2019. In addition to recognized revenue, Acceleware also received non-refundable milestone cash payments of \$2.4 million for the year ended December 31, 2021 (Year ended December 31, 2020 – \$0.3 million) which were recorded in deferred revenue. Data revenue in the RF Heating segment, equal to the amount recorded in deferred revenue, will be recognized as revenue at the end of the RF XL Pilot or when the data contracts are terminated, whichever is earlier.

<b>RF Heating Revenue</b>	Year ended	Year ended	% change
	December 31, 2021	December 31, 2020	2021
			over 2020
Software	\$ 85,000	\$-	N/A
Maintenance	11,250	-	N/A
Services	55,000	-	N/A
	\$ 151,250	\$-	N/A

RF Heating revenue was higher in the year ended December 31, 2021 at \$151,250 compared to \$nil in the year ended December 31, 2020, driven by higher software revenue from the sale in Q1 2021 of the Company's AxHEAT RF heating simulation software to a major oil sands producer in connection with a data revenue agreement and due to higher services revenue for sales of simulation services in Q3 2021. Since 2018, the Company has been successful selling data revenue agreements to major oil sands producers which provide the customer with the right to access and use data obtained from the RF XL Pilot. Under *IFRS 15 Revenue from Contracts with Customers*, these contracts do not meet all requirements for revenue recognition over-time, therefore revenue recognition defaults to the end of the contract. As at December 31, 2021, deferred revenue of \$3,050,000 (December 31, 2020 - \$750,000) has been recorded under these contracts for amounts that have been received in cash, and will be recognized as revenue once heating is complete or the contracts are terminated, whichever is earlier.

HPC Revenue	Year ended		ear ended	% change
	December 31, 2021		mber 31, 2020	2021
				over 2020
Software	\$ 251,588	\$	628,833	-60%
Maintenance	331,273		270,448	22%
Services	18,659		-	N/A
	\$ \$ 601,520		899,281	-33%

HPC revenue was \$601,520 in the year ended December 31, 2021, a decrease of 33% compared to \$899,281 in the year ended December 31, 2020 due to the above-mentioned 2020 revenue contract, partially offset by increased demand for software in the oil and gas sector in early 2021.

Expenses	Year ended	Year ended		% change
	December 31, 2021	December 31, 2020		2021
				over 2020
Cost of revenue	\$ 41,532	\$	-	N/A
General & administrative	1,774,921		2,059,303	-14%
Research & development	2,982,295		958,867	211%
	\$ 4,798,748	\$	3,018,170	59%

Expenses increased 59% in the year ended December 31, 2021, compared to the year ended December 31, 2020, due to higher R&D expenses. Higher R&D expenses are a result of higher contractor and materials costs for the RF XL Pilot activities in 2021. During the year ended December 31, 2021, manufacturing and assembly of the RF XL Pilot electrical house including installation of the CTI prototype and ancillary components were completed, downhole and surface components were ordered, received and installed, and the well drilling and completion program was completed successfully. G&A expenses were lower in the year ended December 31, 2021, due to lower payroll and payroll related costs.

RF Heating Expenses	Year ended	,	Year ended	% change
	December 31, 2021	December 31, 2020		2021
				over 2020
Cost of revenue	\$ 35,725	\$	-	N/A
General & administrative	1,326,858		1,473,350	-10%
Research & development	2,966,316		802,347	270%
	\$ 4,328,899	\$	2,275,697	90%

RF Heating expenses increased 90% to \$4,328,899 in the year ended December 31, 2021 compared to \$2,275,697 for the year ended December 31, 2020 because of an 270% increase in R&D expenses for increased activity on the RF XL Pilot as noted above. G&A expenses for the year ended December 31, 2021 decreased 10% compared to the year ended December 31, 2020 due to lower payroll and payroll related costs.

HPC Expenses	Year ended	Year ended	% change
	December 31, 2021	December 31, 2020	2021
			over 2020
Cost of revenue	\$ 5,807	\$-	N/A
General & administrative	448,063	585,953	-24%
Research & development	15,979	156,520	-90%
	\$ 469,849	\$ 742,473	-37%

HPC expenses were \$469,849 in the year ended December 31, 2021 a decrease of 37% compared to \$742,473 in the year ended December 31, 2020 as the Company continues to focus the majority of resources on the RF XL Pilot.

## SUMMARY OF QUARTERLY RESULTS

The following table highlights revenue, cash generated (used) in operating activities, total comprehensive loss and loss per share for the eight most recently completed quarters ended December 31, 2021.

		202	1			20	20	
	Q4	Q3	Q2 Q1		Q4	Q4 Q3		Q1
Revenue	\$87,031	\$297,226	\$97,408	\$271,106	\$74,347	\$130,219	\$611,712	\$83,003
Cash generated (used) in operating activities	(1,440,665)	(211,875)	(467,445)	1,814,730	(981,479)	(544,129)	(1,216,156)	368,055
Total comprehensive loss for the period	(1,755,118)	(1,103,068)	(721,632)	(499,775)	(1,041,937)	(541,689)	(50,709)	(465,318)
Loss per share basic and diluted	(\$0.02)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.001)	(\$0.004)

The Company's software revenue model results in relatively few overall sales transactions with higher overall revenue per transaction, which could potentially lead to increased volatility in quarterly revenue. This was evident in Q3 2021, Q1 2021 and Q2 2020 during which the Company recorded noticeably higher revenue than in other recent quarters. The timing of receipt of government funding and spending levels for the RF XL Pilot throughout all eight quarters contributed to the periods of positive cash flow from operating activities.

Revenue	Three months		Thr	ee months	Three months		% change	% change
	ended			ended	ended		Q4 2021	Q4 2021
	December 31,		Dec	cember 31,	September 30,		over	over
	2021			2020	2021		Q4 2020	Q3 2021
Software	\$	21,374	\$	17,362	\$	189,315	23%	-89%
Maintenance		65,657		56,985		52,911	15%	24%
Services	-			-		55,000	N/A	-100%
	\$	87,031	\$	74,347	\$	297,226	17%	-71%

## **RESULTS OF OPERATIONS – THREE MONTHS ENDED DECEMBER 31, 2021**

For the three months ended December 31, 2021, the Company recognized revenue of \$87,031 representing a 17% increase over Q4 2020 driven by increased AxFDTD revenue, and a 71% decrease over Q3 2021, driven mainly by lower seismic software revenue in the HPC division.

<b>RF</b> Heating Revenue	Three months	Three months	Three months	% change	% change
	ended	ended	ended	Q4 2021	Q4 2021
	December 31,	December 31,	September 30,	over Q4	over Q3
	2021	2020	2021	2020	2021
Maintenance	11,250	-	-	N/A	N/A
Services	\$-	\$-	\$ 55,000	N/A	N/A
	\$ 11,250	\$-	\$ 55,000	N/A	-80%

RF Heating revenue was \$11,250 in Q4 2021 compared to \$nil in Q4 2020 and \$55,000 in Q3 2021 due to sales of RF simulation software and services, a relatively new revenue stream attributable to customers' interest in applying RF XL to specific reservoirs and operations.

HPC Revenue	Thre	e months	Three months	Th	ree months	% change	% change
		ended	ended	ended		Q4 2021	Q4 2021
	Dece	ember 31,	December 31,	September 30,		over	over
		2021	2020	2021		Q4 2020	Q3 2021
Software	\$	21,374	17,362	\$	189,315	23%	-89%
Maintenance		54,407	56,985		52,911	-5%	3%
	\$	75,781	74,347	\$	242,226	2%	-69%

HPC revenue remained relatively consistent at \$75,781 in Q4 2021 compared to \$74,347 in Q4 2020. Revenue of \$242,226 in Q3 2021 was due to higher software revenue for a large seismic contract. The Company's software revenue model results in relatively few overall sales transactions with higher overall revenue per transaction, which could potentially lead to increased volatility in quarterly revenue. This was evident in Q3 2021 as revenue fluctuated relative to Q4 2021 and Q4 2020.

## <u>Expenses</u>

Expenses	Three months		Th	ree months	Three months		% change	% change
	ended			ended	ended		Q4 2021	Q4 2021
	December 31,		De	cember 31,	September 30,		over	over
	2021			2020	2021		Q4 2020	Q3 2021
Cost of revenue	\$	-	\$	-	\$	22,250	N/A	-100%
General & administrative	523,	156		703,230		441,729	-26%	18%
Research & development	1,312,	165		318,237		942,511	312%	39%
	\$ 1,835,	321	\$	1,021,467	\$	1,406,490	80%	30%

Expenses for the three months ended December 31, 2021, increased 80% to \$1,835,321 as compared to Q4 2020 and increased 30% compared to Q3 2021 due mainly to significant investment in the RF XL Pilot activities in 2021. During Q4 2021, the Company completed manufacturing and assembly of the RF XL Pilot E-house including installation of the CTI prototype and ancillary components, installed downhole and surface components, and successfully completed the well drilling and completions program.

<b>RF Heating Expenses</b>	Three months	Three months		Three months		% chang	e	% change
	ended	ended		ended		Q4 2021	L	Q4 2021
	December 31,	Decer	ember 31, September 30,		tember 30,	over		over
	2021	2	020		2021	Q4 2020	)	Q3 2021
Cost of revenue	\$-	\$	-	\$	22,250	N/A		-100%
General & administrative	412,653		525,213		348,347	-21%		18%
Research & development	1,312,165		272,592		939,479	381%		40%
	\$ 1,724,818	\$	797,805	\$	1,310,076	116%		32%

RF Heating expenses for the three months ended December 31, 2021, were \$1,724,818 or 116% higher than in Q4 2020 and 32% higher than in Q3 2021. R&D expenses were higher compared to both Q4 2020 and Q3 2021 due to higher contractor and materials costs related to the significantly increased activity for the RF XL Pilot for drilling and completion work. G&A expenses were lower compared to Q4 2020 and higher compared to Q3 2021 due to fluctuations in payroll and payroll related costs.

HPC Expenses	Three months	Three months	Three months	% change	% change
	ended	ended	ended	Q4 2021	Q4 2021
	December 31,	December 31,	September 30,	over	over
	2021	2020	2021	Q4 2020	Q3 2021
General & administrative	110,503	178,017	93,382	-38%	18%
Research & development	-	45,645	3,032	-100%	-100%
	\$ 110,503	<b>\$</b> 223,662	<b>\$</b> 96,414	-51%	15%

HPC expenses for the three months ended December 31, 2021 were \$110,503 or 51% lower than in Q4 2020 and 15% higher than in Q3 2021. G&A expenses were lower compared to Q4 2020 and 18% higher compared to Q3 2021 due to lower payroll and payroll related expenses. R&D expenses were minimal in all comparative periods as the Company focuses the majority of all R&D on the RF XL Pilot.

# LIQUIDITY AND CAPITAL RESOURCES

At December 31, 2021, Acceleware had negative working capital of \$911,335 (December 31, 2020 – positive working capital of \$28,930), \$1,947,512 in cash and cash equivalents (December 31, 2020 - \$1,942,014), and \$121,654 in combined short-term and long-term debt in the form of leases (December 31, 2020 - \$173,932). Fluctuations in cash were attributable to the timing of receipt of government assistance and related R&D spending. Increasing the deficit is deferred revenue of \$3,050,000 as at December 31, 2021 (December 31, 2020 – \$750,000). Despite receiving non-refundable cash payments for these amounts, the milestone payments have not met all requirements for revenue

recognition under IFRS 15 Revenue from Contracts with Customers. These amounts will be recognized as revenue and increase shareholders' equity when RFXL Pilot heating is complete or the data revenue contracts are terminated, whichever is earlier.

In the interests of matching cash requirements with a combination of cash generated from operations, external funding, and capital raising activities, the Company actively manages its cash flow and investments in new products. Acceleware intends to maximize cash generated from operations through several initiatives which include continuing to focus on higher gross margin software products that are marketed through a combination of direct and reseller models; minimizing operating expenses where possible; and limiting capital expenditures. As the Company continues to develop its RF Heating technology, new R&D investments will be financed through a combination of internal cash flow from the HPC business, project funding agreements, government assistance, industry partners and external financing, when available. 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 G&A expenses; and seeking outside financing. The failure of the Company to achieve one or all 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 \$1,440,664 for the three months ended December 31, 2021 compared to cash used in operations of \$981,479 for the three months ended December 31, 2020, an increase due to the timing of receipt of funding for the RF XL Pilot and timing of payment of RF XL Pilot expenses. Cash used in operations before changes in non-cash working capital was \$1,469,514 for Q4 2021 compared to cash used in operations before changes in non-cash working capital of \$994,719 in Q4 2020.

Cash flow used in operations totaled \$305,026 for the year ended December 31, 2021 compared to cash used in operations of \$2,373,710 for the year ended December 31, 2020 due to the timing of receipt of funding for the RF XL Pilot and timing of payment of RF XL Pilot expenses. Cash used in operations before changes in non-cash working capital was \$3,576,924 for the year ended December 31, 2021 compared to cash used in operations before changes in non-cash working capital of \$1,739,559 for the year ended December 31, 2020.

On March 1, 2022, the Company launched a non-brokered private placement of 10% unsecured convertible debentures due 2026 for approximate gross proceeds of \$1,500,000. Each debenture matures four years after the issue date and is convertible into units of the Company at a conversion price of \$0.80. Each unit consists of one common share and one-half of one common share purchase warrant. Each whole warrant entitles the holder to acquire one common share, at an exercise price equal to 200% of the conversion price of the debentures for a 24-month period following the distribution of the debentures. Net proceeds from the offering shall be used to fund the further development and testing of the Company's RF heating technology and for general corporate purposes. The Company expects to close the private placement no later than April 15, 2022.

### Trade and Other Receivables

Trade and other receivables as at December 31, 2021 increased to \$2,960,602, compared to \$1,206,962 as at December 31, 2020 due to an increase in government assistance receivable for work completed on the RF XL Pilot. The Company maintains close contact with its customers to mitigate risk in the collection of receivables and a large portion of the receivables is due from provincial and federal government bodies related to a contract for government assistance, and therefore is deemed lower-risk.

<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

### **Current Liabilities**

As at December 31, 2021, the Company had current liabilities of \$6,108,625 compared to current liabilities of \$3,652,474 as at December 31, 2020. The change in current liabilities is due to receipt and recognition of deferred government assistance for R&D and an increase in accounts payable and accrued liabilities for increased costs for the RF XL Pilot.

### 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.

As at December 31, 2021, 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.

Alberta's Innovation Employment Grant ("IEG") to support research and development is effective January 1, 2021 and provides a grant of up to 20% of eligible R&D expenses incurred in Alberta. This new grant effectively replaces Alberta's 10% scientific research and experimental development refundable tax credit that was eliminated as of December 31, 2019. Based on preliminary evaluation, the Company meets eligibility criteria and expects to incur eligible R&D expenditures in the taxation year. No amounts have been recorded as at December 31, 2021 due to uncertainty surrounding the estimate.

### **RISKS FACTORS AND UNCERTAINTIES**

Management defines risk as the probability of a future event that could negatively affect the financial condition and/or results of operations of the Company. The following section describes specific and general risks that could affect the Company. As it is difficult to predict whether any risk will be realized or its related consequences will occur, the actual effect of any risk on the business could be materially different from that anticipated. The following descriptions of risk do not include all possible risks as there may be other risks of which Management is currently unaware.

### Liquidity Risk

The Company actively manages cash flow and investment in new products in order to match its cash requirements to its 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 higher gross margin software products; to minimize operating expenses where possible; and to limit capital expenditures. As the Company continues to develop its RF Heating technology, new R&D investments will be financed through a combination of internal cash flow from the HPC business, government assistance, industry partners, 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 G&A 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

#### **Requirement for Additional Financing**

Management of Acceleware may seek additional funding to support ongoing losses, particularly losses associated with the development and commercialization of its RF Heating technology, until Acceleware reaches a level of revenue which will sustain its operations on an internal basis. The rate of growth in the market for Acceleware's products and services and the Company's success in gaining market share have been lower than Acceleware originally anticipated. Acceleware cannot be assured that additional funding will be available, or if available, that it will be available on acceptable terms. If adequate funds are not available, Acceleware may have to reduce substantially or eliminate expenditures for research and development, testing, production, and marketing of its products and services. There can be no assurance that the Company will be able to raise additional capital if its capital resources are exhausted. The ability to arrange additional financing in the future will depend, in part, upon the prevailing capital market conditions as well as the business and performance of Acceleware. There can be no assurance that Acceleware of Acceleware will be successful in arranging additional financing or that such additional financing will be available on satisfactory terms.

#### **Economic Developments**

Fluctuations in oil and natural gas prices, combined with COVID-19 and the measures taken by governments and companies to reduce its spread, may have an adverse impact on many aspects of the Company's business. Increased capital market and interest rate volatility may negatively affect the Company's ability to access external financing. The overall market for the Company's products and services may undergo stagnant or negative growth due to reduced capital expenditures by the Company's current and potential customers. Supply chain shortages or disruptions, the full or partial closure of transportation infrastructure, temporary suspension of some or all business operations, and labour disruptions (including those affecting key employees and directors of the Company) arising from illness, reductions in working hours, layoffs, or restrictions on movement may also adversely affect the Company's growth and operating results. Whether and to what extent the market volatility and COVID-19 outbreak will impact the Company's business and operations will depend on future developments which, at this time, remain uncertain and difficult to predict.

#### Dependence on Key Personnel

The success of Acceleware is largely dependent on the performance of its key employees and directors. Failure to retain key employees and directors and to attract and retain additional key employees with necessary skills could have a material adverse impact upon the Company's growth and profitability. Competition for highly skilled management, technical, and other employees is intense. There can be no assurance that the Company will be successful in attracting and retaining such personnel and the departure or death of any of the members of the Company's executive team and key directors could have a material adverse effect on the Company's business, results of operations, and financial condition.

#### Investor Activism

Investor activism or activities by non-governmental organizations could limit sources of capital for the energy sector or the development of clean technologies applicable in the energy industry. Some institutional investors in the energy industry are placing an increased emphasis on ESG factors when allocating their capital. These potential investors may be seeking enhanced ESG disclosures or may implement policies that discourage investment in the hydrocarbon industry. To the extent that certain institutions implement policies that discourage investments in this industry, it could have an adverse effect on the Company's financing costs and access to liquidity and capital. Additionally, if the Company's reputation is diminished as a result of the energy related industries in which it operates, it could result in increased operation or regulatory costs, lower shareholder confidence or loss of public support for the Company's business.

### Intellectual Property Risks

Because much of the Company's potential success and value lies in its ownership and use of intellectual property, its failure to protect its intellectual property may negatively affect its business and value. Acceleware's ability to compete effectively is largely dependent upon the maintenance and protection of its intellectual property. The Company relies primarily on trade secret, trademark and copyright law, and, when appropriate, patent protection, as well as confidentiality procedures and licensing arrangements, to establish and protect the rights to its technology. The Company typically enters into confidentiality or license agreements with its employees, consultants, customers, strategic partners, and vendors in an effort to control access to and distribution of its products,

documentation, and other proprietary information. Despite these precautions, it may be possible for a third party to copy or otherwise obtain and use the Company's proprietary technology without authorization.

Policing unauthorized use of the Company's intellectual property is difficult. The steps that the Company takes may not prevent misappropriation of its intellectual property, and the agreements the Company enters into may be difficult to enforce. In addition, effective intellectual property protection may be unavailable or limited in some jurisdictions outside Canada and the United States. Litigation may be necessary in the future in order to enforce or protect the Company's intellectual property rights or to determine the validity and scope of the proprietary rights of others. That litigation could cause the Company to incur substantial costs and divert resources away from the Company's daily business, which in turn could materially hinder its business. The Company may be subject to damaging and disruptive intellectual property litigation.

The Company may be subject to intellectual property litigation that could:

- Be time-consuming and expensive;
- Divert attention and resources away from the Company's daily business;
- Impede or prevent delivery of the Company's products and services; and
- Require the Company to pay significant royalties, licensing fees and damages.

Although the Company is not aware that its products or services infringe or violate the intellectual property rights of third parties, and although the Company has not been served notice of any potential infringement or violation, the Company may be subject to infringement claims in the future. Since patent applications are kept confidential for a period of time after filing, applications may have been filed that, if issued as patents, could relate to the Company's products or services.

Parties making claims of infringement may be able to obtain injunctive or other equitable relief that could effectively block the Company's ability to provide its products and services in Canada, the US, and other jurisdictions and could cause the Company to pay substantial damages. In the event of a successful claim of infringement, the Company and its customers may need to obtain one or more licenses from third parties, which may not be available at a reasonable cost, if at all. The defense of any lawsuit could result in time consuming and expensive litigation, regardless of the merits of such claims, as well as resulting damages, license fees, royalty payments, and restrictions on the Company's ability to provide its products or services, any of which could harm its business.

The Company is not aware that any of its products infringe the proprietary rights of third parties. There can be no assurance, however, that third parties will not claim such infringement by the Company or its licensees with respect to current or future products. The Company expects that software product developers will increasingly be subject to such claims as the number of products and competitors in the Company's industry segment grows and the functionality of products in different industry segments overlaps. Any such claims, with or without merit, could be time consuming, result in costly litigation, cause product shipment delays, or require the Company to enter into royalty or licensing agreements which may not be available on terms acceptable to the Company. Any of the foregoing could have a material adverse effect on the Company's business, results of operations, and financial condition.

### Failure to Manage Growth Successfully

In the event that Acceleware's business grows rapidly, the growth may place a strain on managerial and financial resources. Such expansion may result in substantial growth in the number of its employees, the scope of its operating and financial systems, and the geographic area of its operations, resulting in increased responsibility for both existing and new management personnel. The Company's future growth will depend upon a number of factors, including the ability to:

• Acquire and train sales and marketing staff to expand Acceleware's presence in the evolving marketplace for the Company's products and services, and keep staff informed regarding the technical features, issues and key selling points of the Company's products and services;

- Attract and retain qualified technical personnel to continue to develop reliable and scalable solutions and services that respond to evolving customer needs and technological developments;
- Maintain high quality customer service and support as sales increase; and
- Expand the Company's internal management while maintaining appropriate financial controls over operations and providing support to other functional areas within the Company.

The Company's inability to achieve any of these objectives could harm the Company's business, financial condition, operating results, and prospects.

## Risks of Security Breaches to the Company's Network (Cyber Security)

An experienced programmer may attempt on occasion to penetrate the Company's network security and could misappropriate the Company's or its customers' proprietary information or cause interruptions in the Company's operations. Acceleware's operations as proprietary software developers, and developers of leading-edge RF Heating technology could increase the risk of a cyber-attack from industrial competitors, cyber criminals, and government actors. Acceleware has implemented various means to limit such an occurrence but may be required to expend significant capital and resources to protect against or to alleviate problems caused by such hackers in the future. Additionally, the Company may not have a timely remedy for any attack on the Company's network security. Such purposeful security breaches could have a material adverse effect on the Company's business, results of operations and financial condition. Risks include the untimely disclosure of proprietary data prior to its adequate protection through patent, trade secret or copyright. Should the Company's customer data be compromised, it could expose the Company to a material risk of loss or litigation, reputational damage, and possible liability. In addition to a material risk of loss or litigation, reputational damage, and possible liability.

In offering certain payment services for some products and services, the Company could become increasingly reliant on encryption and authentication technology licensed from third parties to provide the security and authentication necessary to effect secure transmission of confidential information, such as customer credit card numbers. Advances in computer capabilities, discoveries in the field of cryptography and other discoveries, events, or developments could lead to a compromise or breach of the algorithms or licensed encryption authentication technology that the Company uses to protect such confidential information. If such a compromise or breach of the Company's licensed encryption authentication technology occurs, it could have a material adverse effect on the Company's business, its reputation, results of operations, and financial condition. The Company may be required to expend significant capital and resources to protect against the threat of such security, encryption, and authentication technology breaches or to alleviate problems caused by such breaches.

Acceleware's Management is responsible for assessing and overseeing risks associated with cyber security and determining, with its IT staff, what measures are appropriate to protect against these risks. The Company holds insurance against cyber security incidents. However, the coverage may be inadequate to fully cover every cyber security risk.

### **Reliance on Third Party Licenses**

The Company anticipates relying on certain software that Acceleware licenses from third parties, including a software program that is integrated with internally developed software and used in Acceleware's products to perform key functions. There can be no assurance that these third party licenses will continue to be available to the Company on commercially reasonable terms. The loss of, or inability to maintain, any of these licenses, could result in delays or reductions in product and service deployment until equivalent software can be developed, identified, licensed, and integrated, which could materially adversely affect the Company's business, results of operations, and financial condition.

### Technological Change, New Products and Standards

To remain competitive, Acceleware must continue to enhance and improve the current line of products. The technology industry is characterized by rapid technological change, changes in user and customer requirements and preferences, frequent new product and service introductions embodying new technologies, and the emergence of new industry standards and practices that could render Acceleware's existing products and systems obsolete.

Acceleware's products embody complex technology and may not always be compatible with current and evolving technical standards and products developed by others. Failure or delays by Acceleware to meet or comply with the requisite and evolving industry or user standards could have a material adverse effect on Acceleware's business, results of operations, and financial condition. Acceleware's ability to anticipate changes in technology, technical standards, and products will be a significant factor in its ability to compete. There can be no assurance that Acceleware will be successful in identifying, developing, manufacturing, and marketing products that will respond to technological change or evolving standards. Acceleware's business may be adversely affected if it incurs delays in developing new products or enhancements or if such products or enhancements do not gain market acceptance. In addition, there can be no assurance that products or technologies developed by others will not render Acceleware's products or technologies non-competitive or obsolete.

### Price Volatility of Publicly Traded Securities

In recent years, the securities markets in the US and Canada have experienced a high level of price and volume volatility, and the market prices of securities of many companies have experienced wide fluctuations which have not necessarily been related to the operating performance, underlying asset values or prospects of such companies. There can be no assurance that continual fluctuations in price will not occur. It may be anticipated that any quoted market price for the Common Shares will be subject to market trends generally, notwithstanding any potential success of the Company in creating revenues, cash flows, or earnings. The value of the Company's securities will be affected by such volatility.

### Earnings and Dividend Record

The Company has no earnings or dividend record. To date, the Company has paid no dividends on its Common Shares and does not anticipate doing so in the foreseeable future.

## **TRANSACTIONS WITH RELATED PARTIES**

For the year ended December 31, 2021, the Company incurred expenses in the amount of \$305,893 (December 31, 2020 - \$311,062) with a company controlled by an officer of the Company as fees for duties performed in managing research and development operations and these expenses are included in research and development. Of the total, \$73,325 was included in accounts payable and accrued liabilities as at December 31, 2021 (December 31, 2020 - \$116,375). These fees were incurred in the normal course of operations and initially measured at fair value.

For the year ended December 31, 2021, the Company incurred expenses in the amount of \$24,978 (December 31, 2020 - \$89,169) 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 December 31, 2021, \$411 was included in accounts payable and accrued liabilities (December 31, 2020 - \$17,630) These fees were incurred in the normal course of operations initially measured at fair value.

For the year ended December 31, 2021, the Company incurred expenses in the amount of \$150,000 (December 31, 2020 - \$71,050) with a company controlled by the spouse of an officer of the Company for marketing and communication and these expenses are included in general and administrative. Of the total, \$12,804 was included in accounts payable and accrued liabilities as at December 31, 2021 (December 31, 2020 - \$8,400). These fees were incurred in the normal course of operations and initially measured at fair value.

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

	2021	2020
Salaries and short-term employee benefits	\$ 1,327,777	\$ 1,464,280
Share-based payments	160,049	174,892
	\$ 1,487,826	\$ 1,639,172

## **CRITICAL ACCOUNTING ESTIMATES**

### General

The preparation of the Financial Statements requires Management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. The estimates are based on historical experience and on various other assumptions that are believed to be reasonable under the circumstances. The ongoing evaluation of these estimates forms the basis for making judgements about the carrying values of assets and liabilities and the reported amount of revenues and expenses in cases where they are not readily ascertainable from other sources. Actual amounts may differ from these estimates under different assumptions or conditions.

The Company's significant accounting policies are fully described in Note 4 to the Financial Statements. Certain accounting policies are particularly important to the reporting of financial position and results of operations and require the application of judgement by Management. An accounting policy is deemed to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made. Different Management estimates that reasonably could have been used, or changes in the accounting estimates that are reasonably likely to occur periodically, could have a material impact on the Financial Statements. Management believes the following critical accounting policies reflect the more significant estimates and assumptions used in the preparation of Financial Statements.

### **SIGNIFICANT ACCOUNTING POLICIES**

#### **Going Concern Assumption**

The Financial Statements have been prepared on a going concern basis, which assumes that the Company will be able to realize its assets and discharge its liabilities in the normal course of business. The Company's ability to continue as a going concern is dependent upon its ability to generate sufficient cash flow to meet its obligations as they come due, to obtain additional financing as may be required, and ultimately to achieve successful operations. However, no assurance can be given at this time as to whether the Company will achieve any of these conditions. If the Company were to change its assumption regarding the ability to continue as a going concern for a reasonable period of time, adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities would likely be necessary and potentially material.

#### **Revenue Recognition**

The Company's revenue recognition requirements pertaining to determining performance obligations and transaction prices for all types of contracts with customers are very complex and are affected by interpretations of those contracts and the applicable standards and certain judgements. One of the critical judgements made is the assessment of the probability of collecting the related accounts receivable balance on a customer-by-customer basis. As a result, the timing or amount of revenue recognition may have been different if different assessments of the probability of collection had been made at the time that the transactions were recorded in revenue.

#### Decommissioning Liability

The Company recognizes a decommissioning liability in the period it arose with a corresponding increase to the carrying amount of the related asset. Measurement occurs when a legal or constructive obligation arises. Provisions are measured at the present value of management's best estimate of the expenditures expected to be required to settle the obligation discounted using the risk-free rate, updated at each reporting date. The increase in the provision due to the passage of time (accretion) is recognized as a finance expense whereas increases or decreases due to changes in the estimated cost to decommission the asset are recorded with the associated asset or expense. Actual costs incurred upon settlement of the decommissioning liability reduce the liability to the extent the provision was established and differences between actual costs incurred and estimated costs will be recorded as a gain or loss

## **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	108,355,340
Stock Options	9,489,164

# 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 December 31, 2021 that are available on <u>www.sedar.com</u> and as noted below.

Research and Development	2021	2020
Salaries	\$ 811,434	\$ 794,654
Consulting	725,188	1,041,792
R&D supplies and materials	10,965,030	465,927
Share-based payments	52,265	48,878
Rent and overhead allocations	34,844	41,144
Amortization	25,793	66,746
Government assistance	(9,632,259)	(1,500,274)
Total	\$ 2,982,295	\$ 958,867

Sales, General and Administration	2021	2020
Salaries	\$ 702,038	\$ 1,037,362
Marketing	235,749	116,338
Travel	7,643	2,403
Share-based payments	166,566	170,805
Rent, supplies and public company fees	335,335	301,571
Amortization	25,793	66,746
Professional fees	301,797	364,078
Total	\$ 1,774,921	\$ 2,059,303