

**ACCELEWARE LTD.**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS**  
**FOR THE THREE AND TWELVE MONTHS ENDED DECEMBER 31, 2022**

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, 2022 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](http://www.sedar.com) under Acceleware Ltd.

This MD&A is presented as of March 23, 2023. 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 expectation that RF heating technology can be economically applied to industrial heating and drying applications;
- 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 heating 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 pilot testing and in commercial products;
- that the analyses coupled with lab testing that the Company has performed to date regarding the technical and economic feasibility of RF heating technology for industrial heating and drying applications will be confirmed in future field testing and in commercial products;
- that the Company will maintain all regulatory approvals required to carry out the pilot 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:

- **RF Heating:** radio frequency heating for industrial applications using the Company's proprietary Clean Tech Inverter ("CTI") including enhanced oil recovery ("RF XL"), and
- **HPC:** high-performance computing scientific software.

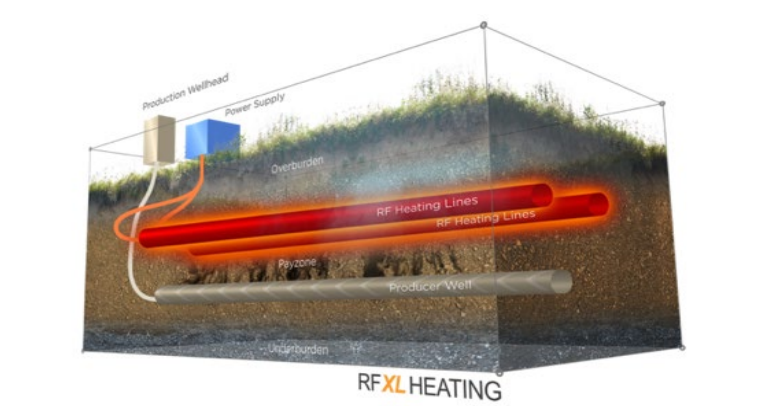
Acceleware's patent pending CTI heating 'engine' can provide reliable, scalable, on-demand, decarbonized heat via RF energy. CTI is extremely efficient, it can be adapted to multiple industrial clean heating applications, and it may be able to displace fossil fuel reliant heating systems that are carbon intensive and costly.

The CTI has been successfully field tested over many months, including six months of operation at the RF XL Pilot. The CTI uses leading edge silicon carbide ("SiC") transistor technology that results in over 98 percent efficiency converting AC or DC electricity to RF energy. By delivering this energy directly (and with minimal losses) to the material being heated, a CTI-powered RF heating system could reduce energy intensity by up to an estimated 50 percent versus fossil fuel reliant heating.\*

RF XL is Acceleware's patented RF heating technology designed to improve the extraction of heavy oil and bitumen. RF XL features 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 when compared to other extraction techniques, including:

- immediate GHG emission reductions;
- the elimination of external water use;
- a substantial decrease in land use;
- no requirement for solvents;
- 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 helps clients meet their electronic and medical product development needs with state-of-the-art electro-magnetic ("EM") simulation software.

\*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.

### RF Heating for Enhanced Oil Recovery

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™, 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.

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 R&D efforts in RF heating for oil production have focused on reducing the capital cost of the technology, increasing its efficiency and therefore reducing its operating cost, and improving its scalability to very long horizontal wells commonly used in Alberta, Latin America, Africa, Asia, the Middle East and elsewhere. Acceleware's unique expertise with RF heating technology has resulted in the generation of feasibility study and software revenue both locally and abroad. A major step in achieving these goals was the development of a low-capital cost and highly efficient RF inverter platform – the CTI.

### CTI Decarbonization of Other Industrial Heating Applications

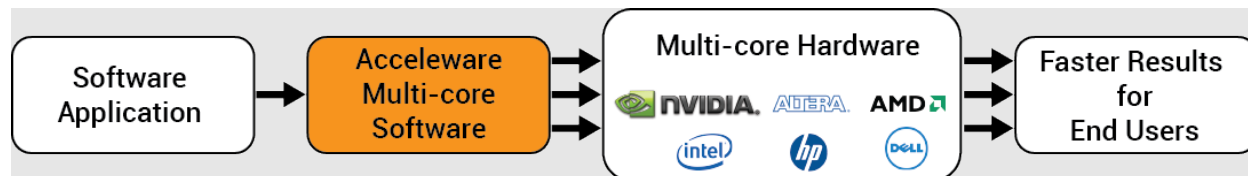
The Company has R&D projects underway with partners to quantify the benefits of using CTI-produced RF energy in "turquoise" hydrogen production – whereby hydrogen is produced from the pyrolysis of natural gas and carbon is sequestered in solid form; in food and agricultural drying, and in mining applications. Other applications in drying and in commercial heating are being explored.



### High-Performance Computing Software

Acceleware's traditional HPC market has 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 phone 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.



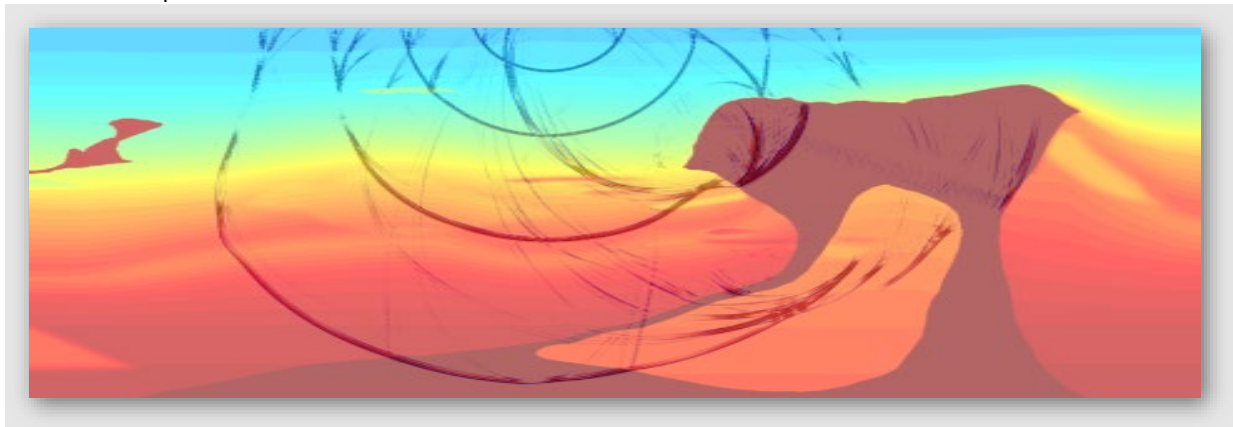
The EM solutions developed by Acceleware can be easily integrated by software developers, saving them the expense and time of migrating applications to high performance multi-core platforms. Acceleware improves the overall experience for end users of these applications by providing greater computing 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 AxFTD 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 Time Migration solution, followed closely by AxRTM™ in 2009, a central processing unit ("CPU") and GPU enabled Reverse Time Migration ("RTM") library.

In 2013, Acceleware introduced AxWave™, a forward modelling variant of AxRTM which allows customers to accurately model seismic acquisition and perform data characterization.

In late 2014, Acceleware added AxFWI™ 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, 2022, Acceleware had 18 employees and long-term contractors, including three in administration; three in sales, marketing and product management; and twelve in R&D and engineering.

For further information about the Company, please visit [www.acceleware.com](http://www.acceleware.com).

## OPERATING SUMMARY

The commercial-scale RF XL pilot project at Marwayne, Alberta (the “RF XL Pilot”) is intended to demonstrate RF XL in an operational environment. In the opinion of Management, once the RF XL Pilot is complete, RF XL will have achieved Technology Readiness Level 8, which is the final level before early adoption and commercialization<sup>1</sup>. RF XL is the first application of the Company’s patent-protected CTI. 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 several months of operation at the RF XL Pilot. When combined with existing heating systems, CTI may be able to facilitate an economic decarbonization strategy for many organizations. Acceleware has established or is engaged in discussions to establish partnerships to develop CTI prototypes for applications in industries such as hydrogen production, food and agricultural drying, and mining.

The Company continues to make progress on the RF XL Pilot, and based on initial observations, remains confident that RF XL will become viable as a critical technology in the effort to decarbonize heavy oil and oil sands production. Initial data analysis, backed up with subsequent “history-matching” simulations and further analyses provide strong evidence that the operation of the RF XL Pilot in 2022 resulted in sustained RF heating of the formation around the heating well prior to a pause in operations for a maintenance workover.

Operational highlights from the RF XL Pilot since the beginning of 2022 include:

- The surface facilities for the RF XL Pilot were completed in early 2022, after the heating and production wells were drilled and completed in late 2021.
- The RF XL system was energized in early March 2022.
- The production pump was also started in March 2022.
- Oil production commenced in April 2022 and continued through Q3 2022 with shipments made and proceeds recorded as an offset to R&D expenses.
- The Acceleware operations team successfully performed debugging, optimizations, and improvements to the overall system, surface facilities and the CTI before beginning a slow ramp-up of RF power injected into the system.
- The Company successfully injected RF power into the heating well for over 200 days — a significant milestone and something that has never been achieved before.
- The CTI successfully operated for seven consecutive months at a variety of power levels and operating conditions.
- In late July, the fibre optic distributed temperature sensing (“DTS”) system in the heating well was damaged during a maintenance operation.
- After the DTS break, RF power was reduced for safety and a plan for a heating well workover was developed. The workover commenced in October 2022, and remains ongoing. More details on the workover progress are discussed below.

In addition, strategic and financial highlights since the beginning of 2022 include:

- [On February 22, 2023, Acceleware and Aurora Hydrogen announced the award of \\$2 million](#) from Alberta Innovates to Aurora Hydrogen for a collaborative project. The \$5.5 million joint development will work to develop a new method of methane pyrolysis, utilizing RF energy from Acceleware’s CTI to heat Aurora’s unique reactor.
- In December 2022, Alberta Innovates committed an additional \$0.9 million funding for the RF XL Pilot.
- On November 10, 2022, the Company closed a private placement of 6.7 million units, consisting of one common share and one common share purchase warrant, for gross proceeds of \$1.8 million.

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<sup>1</sup> Technology Readiness Levels are defined by the Government of Canada, Science and Innovation [TRL Assessment Tool](#)

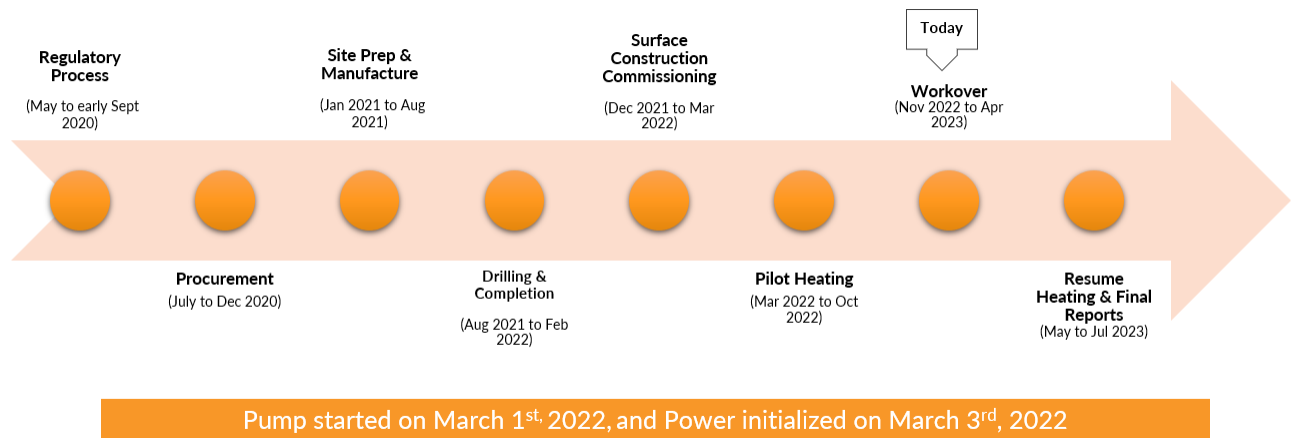
- A collaboration project with Aurora Hydrogen to develop a CTI-powered version of the Aurora methane pyrolysis reactor was announced in September 2022.
- As of April 4, 2022, the Company closed two private placements of 10% unsecured convertible debentures due 2026 for total gross proceeds of \$2.2 million.
- Two additional patents are now under development.
- CEO, Geoff Clark, became a Canada’s [Clean 50 Honouree for 2022](#).

The Company now has 13 patents granted or allowed to protect various proprietary technologies related to Aceleware’s intellectual property, and 31 patent applications pending or under development. The Company uses an integrated strategy for IP protection involving a combination of patenting and trade secrets, working closely with the patent offices and intellectual property advisors.

Aceleware 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. The Company has been featured in several news stories by [Business News Network](#), and [CBC on television, radio, and online](#). Several new blog posts and videos have been released via social media recently which feature discussions on the RF heating technology by Aceleware’s engineering team. The collection of videos is available for viewing here: [Aceleware Video Posts](#).

### RF XL PILOT UPDATE

In July 2022, Aceleware’s operations team discovered that the DTS system in the RF XL heating well had ruptured during a maintenance operation and needed to be replaced. After extensive planning and procurement activities, a workover program commenced in October 2022 and continues to be in progress. Though not a core component of the RF XL technology itself, the DTS is important to data gathering and power regulation to ensure the system operates within specified parameters. Additionally, the Company took the opportunity with a workover to remove and inspect certain downhole components of the RF XL system



Broadly, the workover program, developed with input and review from industry partners, included the following steps:

- Remove DTS;
- Remove the downhole components required to “fish” portion of DTS remaining in well;
- Inspect, replace, repair, and/or improve removable heating well components as required;
- Inspect, using various in-well techniques, the non-removable components of the heating well;
- Inspect and repair well, if required;
- Reassemble and power up.

During workover planning, the Company scaled back heating and continued to produce oil. When the workover activities commenced at site, RF power was reduced to zero, and oil production was paused. During October and November of 2022, the DTS and certain downhole components were removed. In December, the remaining portion of the DTS was successfully “fished” and in-well inspection was performed. When the severed DTS was removed it

was determined that replacement was required. Upon inspection of the extracted subsurface components of the RF XL transmission line, Management implemented an upgrade and modification program intended to improve the performance of the RF XL heating system at high RF power and high temperature. Replacement components have been received, quality control tested for electrical and mechanical specifications and are currently ready for installation underground.

During in-well inspection of the non-removable RF XL transmission line components, the operations team identified subsurface components that required repairs. After analysis by the operations team, service provider partners, and operating partners, Management has decided to move forward with a solution that is expected to be completed in Q2 2023. While downhole operations carry a degree of risk, Acceleware has worked to mitigate that risk by developing a repair plan using standard downhole repair technologies and selecting proven service providers to ensure the best opportunity for success. Upon successful completion of these final workover steps, RF XL components and DTS will be reassembled, and heating operations will resume. Acceleware will implement the workover steps in a staged process whereby the initial stage would result in approximately 50 percent of maximum power being available, performance assessed, and the second stage will then be implemented to achieve full power.\*

Upgrades to the RF XL heating system successfully completed as part of the workover included:

- RF energy transmission system design improvements – leading to better electrical performance and higher tolerance for adverse downhole conditions; and
- CTI operation and control software enhancements – improving the resilience and performance of the CTI.

Learnings from the RF XL Pilot operations and the workover are expected to result in additional intellectual property that will further refine the RF XL system including version 2.0 designs for the CTI and the downhole system that will improve future deployability, performance, and economics.\*

The final timing and cost of the workover remains dependent on availability of service rigs, weather conditions at site, supply chain availability, delivery timing, and the successful deployment of repairs and components.

Including updated estimates for the workover, Acceleware anticipates an increase of \$2 million to the net cost of the RF XL Pilot from \$24 million to \$26 million. Net cost includes estimated gross costs of \$26 million to \$27 million offset by an estimated \$1.0 million to \$2.0 million in proceeds from the sale of produced oil. Estimated proceeds from the sale of produced oil have been determined for the economic life of the RF XL Pilot well and are lower than previously estimated due to differences observed in reservoir behaviour compared to simulation. There is uncertainty in estimating proceeds from the sale of produced oil due to fluctuating oil prices and simulated production volumes. Operating and maintenance cost estimates remain subject to fluctuating commodity prices, in particular electricity, supply chain disruption costs and any additional unforeseen mechanical or electrical engineering costs that could still potentially be encountered in a complex, commercial scale pilot program of this nature. While the RF XL Pilot heating phase was planned for at least six months, this period will be extended in light of the workover to allow Acceleware to capture additional information on the operation of the technology and its efficiency.\*

As of December 31, 2022, total direct funding committed to the RF XL Pilot included \$5.9 million from Alberta Innovates, \$5.5 million from Sustainable Development Technology Canada (“SDTC”), \$5 million from Emissions Reduction Alberta (“ERA”), and up to \$6 million from three consortium members. All three consortium members of the RF XL Pilot have each 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. These three consortium members are three major oil sands producers and represent well over one million barrels of oil sands and heavy oil production per day.

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\* 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.



## FINANCIAL SUMMARY

Gross R&D spending in 2022 was significantly lower than 2021 as construction of the RF XL Pilot was completed in early March 2022, followed by operations which continued through the year. Operation of the RF XL Pilot has a much lower cost than drilling, completion, and construction which occurred for most of 2021. Operational spending in 2022 included some workover costs incurred late in the year. Cumulative RF XL Pilot expenses as at December 31, 2022 were approximately \$25.9 million (December 31, 2021 - \$20.4 million). The remaining cash committed but not yet received from SDTC, ERA and Alberta Innovates, including holdbacks receivable was \$1.0 million as at December 31, 2022 (December 31, 2021 – \$2.9 million) and amounts committed but not yet received or receivable from three major oil-sands producers were \$1.4 million as at December 31, 2022 (December 31, 2021 – \$2.8 million).

Since the onset of the global pandemic, there has been economic volatility precipitated by political events and regulatory reactions. The Company implemented several operational responses to address identified challenges including increased costs for materials and services, tempered access to capital and funding from the oil and gas industry and public markets, and declines in demand for certain software used in the oil and gas industry.

The operational responses include a variety of proactive measures such as:

- successfully closing additional funding,
- reducing reliance on international suppliers by sourcing from Canadian companies,
- engaging with a broader group of funders,
- cost effectively increasing communications with stakeholders regarding progress and technology,
- reducing travel and other discretionary spending, and
- implementing flexible terms of engagement with contractors and employees.

## YEAR TO DATE IN REVIEW

Revenue of \$0.3 million was generated from the Company's software, maintenance and services revenue streams for the year ended December 31, 2022 compared to \$0.7 million for the year ended December 31, 2021. The lower revenue in the year ended December 31, 2022 compared to the year ended December 31, 2021 is due to lower demand for software and maintenance in the HPC segment. In addition to recognized revenue, Acceleware has also received non-refundable milestone cash payments for the RF XL Pilot of \$1.3 million for the year ended December 31, 2022 compared to \$2.3 million for the year ended December 31, 2021 which are recorded in deferred revenue. Data revenue equal to the amount recorded in deferred revenue will be recognized in income 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, 2022 is \$4.4 million (December 31, 2021 – \$3.1 million).

Total comprehensive loss for the year ended December 31, 2022 was \$5.1 million compared to \$4.1 million for the year ended December 31, 2021 primarily due to less government assistance recognized in 2022 for heating operations of the RF XL Pilot, and less revenue.

Gross R&D expenses for the year ended December 31, 2022 were \$5.7 million compared to the \$12.6 million incurred during the year ended December 31, 2021 because of lower costs for operating the RF XL Pilot compared to the costs incurred for drilling, completion, and construction. Well drilling and completion work began in August 2021 and was finished in Q1 2022. Federal and provincial government assistance of \$2.2 million recognized in the year ended December 31, 2022 was lower compared to \$9.6 million for the year ended December 31, 2021 due to the RF XL Pilot commencing operations.

G&A expenses incurred during the year ended December 31, 2022 were \$2.1 million compared to \$1.8 million for the year ended December 31, 2021, an increase of \$0.3 million due primarily to legal and professional fees for the convertible debenture and equity offering and higher non-cash payroll related costs including option grants. The Company continues to prioritize cost management.

As at December 31, 2022, Acceleware had negative working capital of \$0.6 million (December 31, 2021 – negative working capital of \$0.9 million) including cash and cash equivalents of \$1.1 million (December 31, 2021 – \$1.9 million). The increase in working capital is attributable to the timing of receipt and recognition of government and

partner funding. In addition to receivables for government assistance, there is \$1.4 million of industry partner funding still committed and not yet received. Increasing the deficit is deferred revenue of \$4.4 million as at December 31, 2022 (December 31, 2021 – \$3.1 million). 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.

On March 24, 2022, the Company closed its first non-brokered private placement of 10% unsecured convertible debentures due 2026 for gross proceeds of \$1,500,000 ("First Debenture"). On April 5, 2022, the Company closed its second non-brokered private placement on terms, similar to the first, for gross proceeds of \$715,000 ("Second Debenture"). Each debenture matures four years after the issue date and is convertible into units of the Company (each a "Debenture Unit") at a conversion price of \$0.80, at the holders' option beginning four months after the date of issue. Each Debenture 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 \$1.60 for a 24-month period following the issue date of the debentures. If at any time during the Term, the Company announces an offering of common shares below the Conversion Price, the debenture holders have the option to convert at the offering price or the contracted floor price, whichever is higher, provided the debentures are converted within 15 days of the announcement. The contracted floor price for the First Debenture is \$0.68 and \$0.72 for the Second Debenture. At any time during the Term, the Company has the option to pre-pay all or a portion of the debentures provided the Company pays all interest that would have accrued on the redeemed debentures up to maturity. The Company has the option to force conversion of the debentures until the maturity date provided that on the day of conversion, the 30-day volume weighted average price of the Company's common shares is equal to or above \$1.04. 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.

On November 10, 2022, the Company closed a private placement of units ("Units"). Each Unit consists of one common share and one common share purchase warrant ("Warrant"). Each Warrant entitles the holder to acquire one common share at an exercise price of \$0.36 for a period ending on November 10, 2024. In the event the common shares trade at a closing price at or greater than \$0.81 per common share for a period of thirty consecutive trading days, Acceleware may accelerate the expiry date by giving notice and in such case the Warrants will expire on the 30th day after the date on which such notice is given by the Company. Pursuant to the private placement, the Company distributed a total of 6,666,667 Units at a price of \$0.27 per Unit, for total gross proceeds of \$1,800,000. The proceeds will be used to fund a portion of the workover for the commercial-scale pilot test of the RF XL technology and for general corporate purposes.

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, 2022 ("Q4 2022") compared to \$0.1 million in the three months ended December 31, 2021 ("Q4 2021") and \$0.1 million in the previous quarter ended September 30, 2022 ("Q3 2022"). Revenue in Q4 2022 was primarily generated from maintenance and services as software revenue was lower due to less demand for FDTD and seismic software. Acceleware received non-refundable milestone cash payments for the RF XL Pilot of \$0.2 million in Q4 2022 compared to \$0.4 million in

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Q4 2021 and \$nil in Q3 2022, all of which were 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 comprehensive loss for Q4 2022 was \$1.3 million compared to a comprehensive loss of \$1.7 million for Q4 2021 and a comprehensive loss of \$1.0 million for Q3 2022. Comprehensive loss in 2022 was impacted by an unrealized gain on derivative financial instruments embedded within the convertible debenture. These fluctuations are driven primarily by the fluctuation in the Company's share price. Additionally, R&D expenses and government assistance were lower in 2022 compared to 2021 due to less expenditures required for heating operations of the RF XL Pilot.

Gross R&D expenses incurred in Q4 2022 were \$1.2 million compared to gross R&D expenses in Q4 2021 of \$5.2 million and \$0.6 million in Q3 2022. R&D spending was lower in Q4 2022 compared to Q4 2021 as a result of lower costs for operating the RF XL Pilot compared to the costs incurred for drilling, completion and construction but were higher than Q3 2022 due to expenditures incurred for the workover. The RF XL Pilot began operations in March 2022 and incurred additional costs in Q2 2022 for initialization but then experienced lower and more consistent costs in Q3 2022. Government assistance typically reduces R&D expenses; however, all government assistance had been fully recognized at the end of Q2 2022. An additional \$0.9 million in government assistance was received and recognized in Q4 2022 related to the workover. This compares to \$3.9 million in government assistance recognized in Q4 2021 and \$nil million recognized in Q3 2022. Government assistance offsets gross R&D costs.

General and administrative ("G&A") expenses incurred in Q4 2022 were \$0.6 million compared to \$0.5 million in Q4 2021 and \$0.5 million in Q3 2022. Additional legal and professional fees were incurred in connection with the equity offering and were recorded in Q4 2022. Additionally, non-cash payroll related costs were higher in Q4 2022 and Q3 2022 compared to Q4 2021 due to the timing of option grants. The Company continues to prioritize cost control given uncertain economic conditions.

## **STRATEGIC UPDATE**

In 2023, Acceleware will focus on RF XL as the primary strategic revenue-generating and investment technology while pursuing additional applications for the use of the CTI to decarbonize industrial heating across a wide range of heavy emitting industries. Acceleware has a proven track record for successful development and commercialization of revolutionary technologies.

The Company believes that its RF XL technology presents significant potential environmental and economic benefits for the oil industry and that the CTI offers a similar set of benefits to a range of sectors currently reliant on fossil fuel combustion to generate heat. 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 convertible debenture private placement in Q1 and Q2 2022 and the private placement of units in Q4 2022, both of which included common share purchase warrants. However, the unprecedented impact of COVID-19, measures taken by governments and companies to mitigate subsequent economic effects, and investor sentiment towards fossil fuels 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. Development of new CTI applications will be supported by a combination of grant funding, client revenues, and external investment targeted specifically on these projects.\*

### RF XL

The focus for RF XL in 2023 is to complete the RF XL Pilot, demonstrating significant RF power injection into the reservoir, and to show its effect on oil production. The Company will work to secure additional demonstration sites for RF XL in 2023.

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.

Since 2017, Acceleware has been awarded a \$5.5 million non-repayable contribution from SDTC, a \$5 million non-repayable contribution from ERA and a \$5.9 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, 2022, Acceleware had 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 pave the way for continued commercialization after the completion of the RF XL Pilot.

Acceleware, with partner GE, completed the design, manufacturing, and factory testing of the prototype 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 Experimental 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 and completed the drilling and completions program before the end of 2021. Facilities were installed beginning in late 2021 and completed in Q1 2022. Heating operations commenced in early March 2022, with oil production commencing in early April 2022. The RF XL Pilot continued heating for six months and was paused for a maintenance workover in October 2022. The Company continues to make progress on the workover.

#### Clean Tech Inverter Applications

In addition to the RF XL application of the CTI, Acceleware sees significant potential to apply this technology to decarbonize a wide range of heavy emitting industries. Initial focus for Acceleware in these markets will be hydrogen production through the collaboration project with Aurora Hydrogen mentioned above, and bulk solids drying of agricultural, food, and mining products. While Acceleware will pursue a direct sales model for the RF XL solution in the heavy oil and oil sands sector, the Company intends to pursue partnerships and licensing agreements to drive sales of CTI units across these new vertical markets.

#### HPC

Acceleware will continue to focus on the energy and electronics design markets, with AxRTM, AxWave, AxFWI, and AxFDTD as the primary strategic revenue-generating products. Innovations and improvements to AxFDTD will continue for the electronics design market and to be an enabling technology for AxHEAT in the RF heating markets.

In 2023, the Company will access the oil and gas geoscience software market with innovative licensing structures through a direct sales model.

The Company continues to market 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 following table shows selected financial information from Acceleware's audited annual financial statements for the years ended December 31, 2022, December 31, 2021, and December 31, 2020.

	Year Ended Dec 31, 2022 (Audited)	Year Ended Dec 31, 2021 (Audited)	Year Ended Dec 31, 2020 (Audited)
Total revenue	\$328,293	\$752,770	\$899,281
Total comprehensive loss	(\$5,142,168)	(\$4,079,593)	(\$2,099,653)
Loss per share (basic and diluted)	(\$0.05)	(\$0.04)	(\$0.02)
Total assets	\$2,528,832	\$5,352,188	\$3,855,050
Long-term debt <sup>1</sup>	\$1,348,396	\$121,654	\$178,932
Dividends	Nil	Nil	Nil

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

Revenue is lower at December 31, 2022 compared to December 31, 2021 and 2020 due to lower maintenance revenue for contracts that ended in 2019, lower demand for seismic imaging software 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 higher in 2022 and 2021 compared to 2020 due to increasing RF XL Pilot expenditures and increasing deferred revenue. Comprehensive loss was higher in 2022 compared to 2021 due to lower government assistance recognized in 2022. Total assets have fluctuated over the three years. This is attributable to R&D spending for the RF XL Pilot and the timing of receipt of funding milestone payments.

## RESULTS OF OPERATIONS – YEAR ENDED DECEMBER 31, 2022

Revenue	Year ended December 31, 2022	Year ended December 31, 2021	% change 2022 over 2021
Software	\$ 118,024	\$ 336,588	-65%
Maintenance	187,269	342,523	-45%
Services	23,000	73,659	-69%
	\$ 328,293	\$ 752,770	-56%

The Company recognized revenue of \$328,293 in the year ended December 31, 2022, a 56% decrease over the year ended December 31, 2021 primarily due to lower HPC software and maintenance. In addition to recognized revenue, Acceleware also received non-refundable milestone cash payments of \$1.3 million for the year ended December 31, 2022 and \$2.3 million for the year ended December 31, 2021 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.

RF Heating Revenue	Year ended December 31, 2022	Year ended December 31, 2021	% change 2022 over 2021
Software	\$ 85,000	\$ 85,000	0%
Maintenance	9,000	11,250	-20%
Services	23,000	55,000	-58%
	\$ 117,000	\$ 151,250	-23%

RF Heating revenue was \$117,000 in the year ended December 31, 2022, a decrease of 23% compared to \$151,250 in the year ended December 31, 2021, resulting from fluctuation in the timing of sales of simulation services to producers interested in applying the RF XL technology to their own reservoirs.

<b>HPC Revenue</b>	<b>Year ended December 31, 2022</b>	Year ended December 31, 2021	% change 2022 over 2021
Software	\$ 33,024	\$ 251,588	-87%
Maintenance	178,269	331,273	-46%
Services	-	18,659	-100%
	\$ 211,293	\$ 601,520	-65%

HPC revenue was \$211,293 in the year ended December 31, 2022, a decrease of 65% compared to \$601,520 in the year ended December 31, 2021 due lower demand for the Company's HPC software and the timing of maintenance contracts renewals.

<b>Expenses</b>	<b>Year ended December 31, 2022</b>	Year ended December 31, 2021	% change 2022 over 2021
Cost of revenue	\$ 18,748	\$ 41,532	-55%
General & administrative	2,078,196	1,774,921	17%
Research & development	3,445,155	2,982,295	16%
	\$ 5,542,099	\$ 4,798,748	15%

Expenses increased 15% in the year ended December 31, 2022, compared to the year ended December 31, 2021, due primarily to the timing of recognition of government assistance. Excluding government assistance, R&D expenses in the year ended December 31, 2022 were significantly lower for surface construction activities and operation of the RF XL Pilot compared to the costs for drilling and completion activities for the RF XL Pilot in the year ended December 31, 2021. G&A expenses were 17% higher in 2022 due to higher legal and professional costs for the convertible debenture and equity offering, increased patent activity levels and higher payroll related costs.

<b>RF Heating Expenses</b>	<b>Year ended December 31, 2022</b>	Year ended December 31, 2021	% change 2022 over 2021
Cost of revenue	\$ 18,748	\$ 35,725	-48%
General & administrative	1,612,617	1,326,848	22%
Research & development	3,445,155	2,966,316	16%
	\$ 5,076,520	\$ 4,328,889	17%

RF Heating expenses increased 17% in the year ended December 31, 2022 compared to the year ended December 31, 2021 due to the timing of recognition of government assistance. Gross R&D expenses were lower in 2022 compared to 2021 as the costs for heating operations were less than costs related to drilling activities. G&A expenses increased 22% compared to 2021 due to legal and professional costs for the convertible debenture and equity offering, legal costs for increased patent activity and higher payroll related costs.

<b>HPC Expenses</b>	<b>Year ended December 31, 2022</b>	Year ended December 31, 2021	% change 2022 over 2021
Cost of revenue	\$ -	\$ 5,807	-100%
General & administrative	465,579	448,073	4%
Research & development	-	15,979	-100%
	\$ 465,579	\$ 469,859	-1%

HPC expenses were \$465,579 in the year ended December 31, 2022 lower by 1% as compared to \$469,859 in the year ended December 31, 2021 as the Company continues to focus the majority of its 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, 2022.

	2022				2021			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Revenue	\$73,056	\$53,282	\$119,548	\$82,407	\$87,031	\$297,226	\$97,408	\$271,106
Cash generated (used) in operating activities	(613,464)	(216,211)	(2,351,313)	(1,401,272)	(1,440,665)	(211,875)	(467,445)	1,814,730
Total comprehensive loss for the period	(1,345,913)	(1,000,346)	(891,033)	(1,904,876)	(1,755,118)	(1,103,068)	(721,632)	(499,775)
Loss per share basic and diluted	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.02)	(\$0.02)	(\$0.01)	(\$0.01)	(\$0.01)

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. The timing of receipt of government funding and spending levels for the RF XL Pilot throughout all eight quarters contributed to the fluctuations in cash flows from operating activities and total comprehensive loss and loss per share.

## RESULTS OF OPERATIONS – THREE MONTHS ENDED DECEMBER 31, 2022

Revenue	Three months ended December 31, 2022	Three months ended December 31, 2021	Three months ended September 30, 2022	% change Q4 2022 over Q4 2021	% change Q4 2022 over Q3 2022
Software	\$ 6,365	\$ 21,374	\$ 8,652	-70%	-26%
Maintenance	43,691	65,657	44,630	-33%	-2%
Services	23,000	-	-	NA	NA
	\$ 73,056	\$ 87,031	\$ 53,282	-16%	37%

For the three months ended December 31, 2022, the Company recognized revenue of \$73,056 representing a 16% decrease over Q4 2021 and a 37% increase over Q3 2022 driven mainly by fluctuations for software product revenue in both segments and revenue for services in the RF Heating segment.

RF Heating Revenue	Three months ended December 31, 2022	Three months ended December 31, 2021	Three months ended September 30, 2022	% change Q4 2022 over Q4 2021	% change Q4 2022 over Q3 2022
Maintenance	4,500	11,250	4,500	-60%	0%
Services	23,000	-	-	N/A	N/A
	\$ 27,500	\$ 11,250	\$ 4,500	144%	511%

RF Heating revenue was \$27,500 in Q4 2022 compared to \$11,250 in Q4 2021 and \$4,500 in Q3 2022 due to higher services revenue for RF simulation work paid by customers interested in applying RF XL to their specific reservoirs.

HPC Revenue	Three months ended	Three months ended	Three months ended	% change Q4 2022	% change Q4 2022

	<b>December 31, 2022</b>	December 31, 2021	September 30, 2022	over Q4 2021	over Q3 2022
Software	\$ 6,365	21,374	\$ 8,652	-70%	-26%
Maintenance	39,191	54,407	40,130	-28%	-2%
	\$ 45,556	75,781	\$ 48,782	-40%	-7%

HPC revenue was \$45,556 in Q4 2022 compared to \$75,781 in Q4 2021 and \$48,782 in Q3 2022. Revenue was 40% lower in Q4 2022 compared to Q4 2021 due to less demand for the Company's HPC software. 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.

<b>Expenses</b>	<b>Three months ended December 31, 2022</b>	Three months ended December 31, 2021	Three months ended September 30, 2022	% change Q4 2022 over Q4 2021	% change Q4 2022 over Q3 2022
General & administrative	\$ 573,353	523,156	531,716	10%	8%
Research & development	319,552	1,312,165	592,443	-76%	-46%
	\$ 892,905	\$ 1,835,321	\$ 1,124,159	-51%	-21%

Expenses were \$892,905 in Q4 2022, 51% lower compared to \$1,835,321 in Q4 2021 and 21% lower compared to \$1,124,159 in Q3 2022. R&D expenses were lower due to fewer costs required for operating the RF XL Pilot. Impacting R&D expenses was fluctuating levels of recognized government assistance. There was \$0.9 million government assistance recognized in Q4 2022 compared to \$3.9 million recognized in Q4 2021 and \$nil recognized in Q3 2022. Government assistance was higher in Q4 2022 due to an additional funding contribution from Alberta Innovates that was received in Q4 2022. G&A expenses have remained relatively consistent quarter to quarter.

<b>RF Heating Expenses</b>	<b>Three months ended December 31, 2022</b>	Three months ended December 31, 2021	Three months ended September 30, 2022	% change Q4 2022 over Q4 2021	% change Q4 2022 over Q3 2022
General & administrative	\$ 473,118	412,653	405,533	15%	17%
Research & development	319,552	1,312,165	592,443	-76%	-46%
	\$ 792,670	\$ 1,724,818	\$ 997,976	-54%	-21%

RF Heating expenses were \$792,670 in Q4 2022, 54% lower compared to \$1,724,818 in Q4 2021 and 21% lower compared to \$997,976 in Q3 2022. During Q4 2022 and Q3 2022 the Company ran operations of the RF XL Pilot as compared to Q4 2021 during which the Company was performing drilling work. There were additional workover expenses in Q4 2022 compared to Q3 2022. G&A expenses were higher compared to Q4 2021 and Q3 2022 due to additional legal and professional costs for the equity offering in Q4 2022 and fluctuations in payroll related costs.

<b>HPC Expenses</b>	<b>Three months ended December 31, 2022</b>	Three months ended December 31, 2021	Three months ended September 30, 2022	% change Q3 2022 over Q3 2021	% change Q3 2022 over Q2 2022
General & administrative	\$ 100,235	110,503	126,183	-9%	-21%
	\$ 100,235	\$ 110,503	\$ 126,183	-9%	-21%

HPC expenses were \$100,235 in Q4 2022, 9% lower compared to \$110,503 in Q4 2021 and 21% lower compared to \$126,183 in Q3 2022. G&A expenses were lower as the Company was focused on the RF XL Pilot.



## LIQUIDITY AND CAPITAL RESOURCES

At December 31, 2022, Acceleware had negative working capital of \$635,642 (December 31, 2021 – negative working capital of \$911,335), \$1,146,468 in cash and cash equivalents (December 31, 2021 - \$1,947,512), and \$91,355 in combined short-term and long-term lease obligations (December 31, 2021 - \$121,656). As of December 31, 2022, Acceleware also had \$2,215,000 in long-term 10%, semi-annual interest, convertible debentures, the principal amount of which is owing four years from the date of issue or approximately Q1 2026. Fluctuations in non-cash working capital were attributable to the timing of receipt of government assistance and related R&D spending. Cash and cash equivalents decreased due to timing of payments of trade payables. Increasing the deficit is deferred revenue of \$4,350,000 as at December 31, 2022 (December 31, 2021 – \$3,050,000). 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 CTI and the RF XL 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 flows used in operations totaled \$613,464 for the three months ended December 31, 2022 compared to cash flows used in operations of \$1,440,664 for the three months ended December 31, 2021. Cash used in operations before changes in non-cash working capital was \$804,474 for Q4 2022 compared to cash used in operations before changes in non-cash working capital of \$1,469,514 in Q4 2021.

Cash flows used in operations totaled \$4,582,259 for the year ended December 31, 2022 compared to cash flows provided by operations of \$305,026 for the year ended December 31, 2021, a significant increase in the use of cash in operations 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 \$4,807,647 for the year ended December 31, 2022 compared to cash used in operations before changes in non-cash working capital of \$3,576,924 for the year ended December 31, 2021.

On March 24, 2022, the Company closed its first non-brokered private placement of 10% unsecured convertible debentures due 2026 for gross proceeds of \$1,500,000. On April 5, 2022, the Company closed its second non-brokered private placement on terms, similar to the first, for gross proceeds of \$715,000. For both offerings, 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

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\* 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

of the debentures for a 24-month period following the issuance 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.

On November 10, 2022, the Company closed a private placement of Units. Each Unit consists of one common share and one common share purchase warrant. Each Warrant entitles the holder to acquire one common share at an exercise price of \$0.36, for a period ending on November 10, 2024. In the event the common shares trade at a closing price at or greater than \$0.81 per common share for a period of thirty consecutive trading days, Acceleware may accelerate the expiry date by giving notice and in such case the Warrants will expire on the 30th day after the date on which such notice is given by the Company. Pursuant to the private placement, the Company distributed a total of 6,666,667 Units at a price of \$0.27 per Unit, for total gross proceeds of \$1,800,000. The proceeds will be used to fund a portion of the workover for the commercial-scale pilot test of the RF XL technology and for general corporate purposes.

The Company continues to prioritize payments to vendors and works collaboratively with each one to ensure payments are timely or payment plans are established to result in the best outcome for both parties.

#### ***Trade and Other Receivables***

Trade and other receivables as at December 31, 2022 decreased to \$1,034,940, compared to \$2,960,602 as at December 31, 2021 due to payments of 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.

#### ***Current Liabilities***

As at December 31, 2022, the Company had current liabilities of \$3,080,375 compared to current liabilities of \$6,108,625 as at December 31, 2021. The change in current liabilities is due to timing of payment of trade payables for the RF XL Pilot and receipt and recognition of deferred government assistance for R&D.

#### ***Non-current Liabilities***

As at December 31, 2022, the Company had non-current liabilities of \$6,607,471 compared to \$3,366,552 as at December 31, 2021. The increase is due to convertible debt offered in 2022 and an increase in deferred revenue for non-refundable cash payments received for completed milestones.

#### ***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, 2022, 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. The Company met the eligibility criteria and has claimed eligible R&D expenditures for 2021. No amounts have been recorded as at December 31, 2022 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 CTI and 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.\*

### ***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 CTI and 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 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 mitigate the economic consequences, 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 will impact the Company's business and operations will depend on future developments which, at this time, remain uncertain and difficult to predict.

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\* 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

### ***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 deliberate security breaches, the inadvertent transmission of computer viruses could expose the Company 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, 2022, the Company incurred expenses in the amount of \$317,327 (December 31, 2021 - \$305,893) 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 December 31, 2022, \$206,902 was included in accounts payable and accrued liabilities (December 31, 2021 - \$73,325). These fees were incurred in the normal course of operations and in the opinion of Management represent fair value for services rendered.

For the year ended December 31, 2022, the Company incurred expenses in the amount of \$65,923 (December 31, 2021 - \$24,978) with a company controlled by an officer of the Company for legal fees, and this amount is included in general and administrative expense. As at December 31, 2022, \$16,670 (December 31, 2021 - \$411) was included in accounts payable and accrued liabilities. These fees were incurred in the normal course of operations and in the opinion of Management represent fair value for services rendered.

For the year ended December 31, 2022, the Company incurred expenses in the amount of \$176,150 (December 31, 2021 - \$150,000) with a company controlled by the spouse of an officer of the Company for communications and other services, and this amount is included in general and administrative expense. As at December 31, 2022, \$44,750 was included in accounts payable and accrued liabilities (December 31, 2021 - \$12,804). 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:

		<b>2022</b>		<b>2021</b>
Salaries and short-term employee benefits	\$	<b>1,444,038</b>	\$	1,327,777
Share-based payments		<b>226,008</b>		160,049
	<b>\$</b>	<b>1,670,046</b>	<b>\$</b>	<b>1,487,826</b>

## CRITICAL ACCOUNTING ESTIMATES

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 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.

### ***Convertible Debentures***

In accordance with IFRS 9 Financial Instruments, convertible debentures are financial instruments which are accounted for separately, dependent on the nature of their components. The identification of such components embedded within a convertible note requires significant judgment given that it is based on the interpretation of the substance of the contractual arrangement. Where the embedded derivative has a variable conversion rate, the option is recognized as a derivative liability or asset measured at fair value through profit and loss. The residual amount is recognized as a financial liability and subsequently measured at amortized cost.

The convertible debenture consists of a debt host with multiple embedded derivatives including a conversion privilege, a forced conversion option, a pre-payment option, and an anti-dilution option. The embedded derivatives did not meet the definition of equity and are required to be recognized separately from the debt host.

At initial recognition, the embedded derivatives were measured at fair value and recorded as a derivative liability within other non-current liabilities on the statement of financial position. The initial carrying amount of the debt host was the residual amount after deducting the fair value of the embedded derivatives from the proceeds, net of associated transaction costs.

Subsequent to initial recognition, the debt host is measured at amortized cost with interest recognized using the effective interest rate method which will accrete the debt host to the face value of the debentures over the term of the debenture. The embedded derivative liabilities are marked to market at each financial reporting date with changes in fair value recognized in profit 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	116,164,507
Stock Options	5,857,498

## 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 audited financial statements for the year ended December 31, 2022 that are available on [www.sedar.com](http://www.sedar.com) and as noted below.

<b>Research and Development</b>	<b>2022</b>	<b>2021</b>
Salaries	\$ 1,181,558	\$ 811,434
Consulting	482,484	725,188
R&D supplies and materials	3,845,852	10,965,030
Share-based payments	74,947	52,265
Depreciation	35,399	25,793
Rent and overhead Allocation	53,940	34,844
Government assistance	(2,229,025)	(9,632,259)
<b>Total</b>	<b>\$ 3,445,155</b>	<b>\$ 2,982,295</b>

<b>General and Administration</b>	<b>2022</b>	<b>2021</b>
Salaries	\$ 915,279	\$ 702,038
Professional Fees	367,594	301,797
Share Based Payments	201,739	166,566
Rent, Office and Public Company Fees	342,423	335,335
Marketing	203,040	235,749
Depreciation	35,399	25,793
Travel	12,722	7,643
<b>Total</b>	<b>\$ 2,078,196</b>	<b>\$ 1,774,921</b>