

**ACCELEWARE LTD.**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS**  
**FOR THE THREE MONTHS ENDED MARCH 31, 2023**

This management's discussion and analysis of financial condition and results of operations ("MD&A") should be read together with Acceleware Ltd.'s ("Acceleware" or the "Company") unaudited condensed interim financial statements and the accompanying notes for the three months ended March 31, 2023 ("Q1 2023"), which were prepared in accordance with International Financial Reporting Standards ("IFRS"), and the audited annual financial statements, accompanying notes and MD&A for the year ended December 31, 2022. 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 May 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;
- 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 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:** intelligent electric heating using RF energy generated by the Company's proprietary Clean Tech Inverter ("CTI") for industrial applications including enhanced oil recovery ("RF XL"), and
- **HPC:** high-performance computing scientific software.

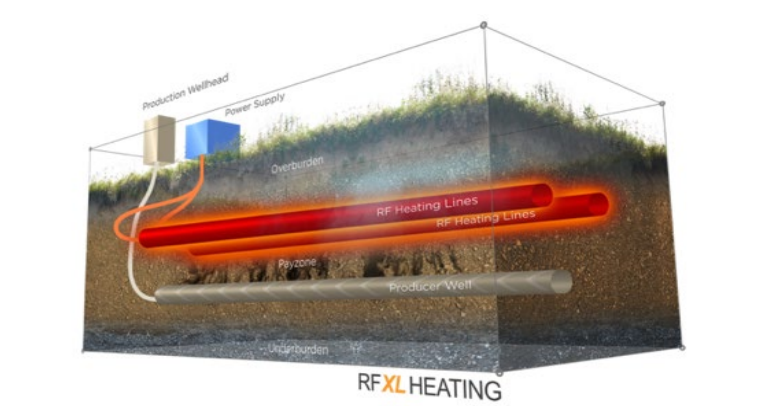
Acceleware's patent pending CTI heating 'engine' can provide intelligent, reliable, scalable, on-demand, decarbonized heat via RF energy. CTI is extremely efficient, it can be adapted to multiple industrial clean heating applications, and it may be able to displace fossil fuel reliant heating systems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

The CTI has been successfully field tested over many months, including over 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 also helps customers 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 segment, 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 inverter platform – the CTI.

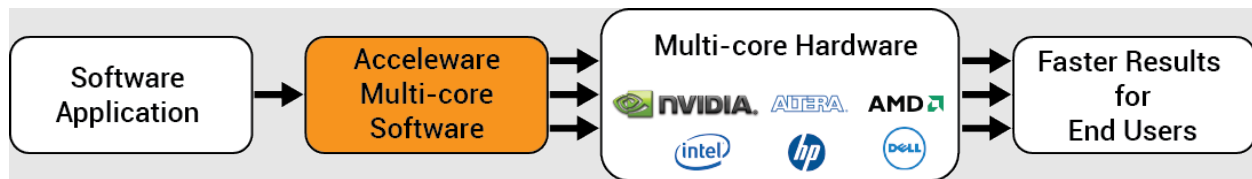
### CTI Decarbonization of Other Industrial Heating Applications

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 industrial 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.



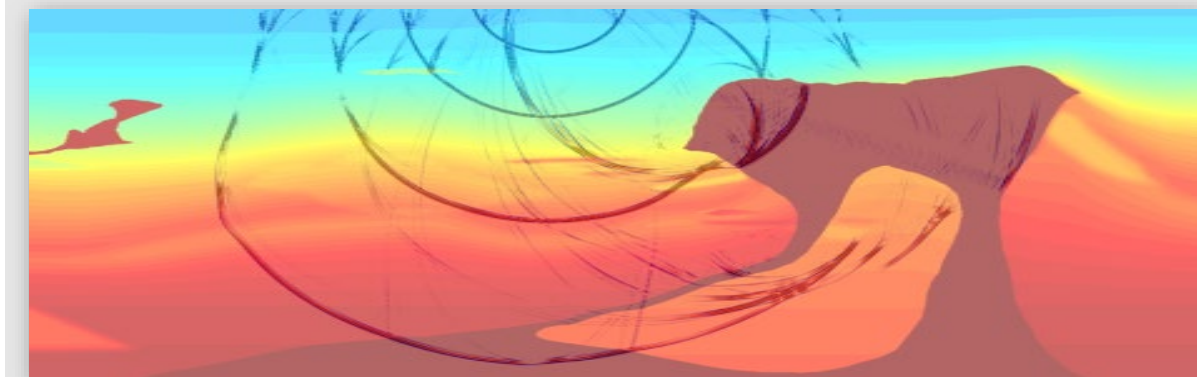
The EM solutions developed by Acceleware can be easily integrated by software developers, saving them the expense and time of migrating applications to high performance multi-core platforms. Acceleware improves the overall experience for end users of these applications by providing greater computing 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 March 31, 2023, Acceleware had 15 employees and long-term contractors, including two in administration; three in sales, marketing and product management; and ten 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 over six 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, initiatives to develop CTI prototypes for applications in industries such as hydrogen production, food and agricultural drying, and mining.

In Q1 2023 the Company continued 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. The Company’s operations team continued data analysis, “history-matching” simulations and other analyses of operational data from 2022 that provide strong evidence that the operation of the RF XL Pilot resulted in sustained RF heating of the formation around the heating well prior to a pause in operations for a maintenance workover. The workover program began in Q4 2022 and has continued in Q1 2023.

Operational highlights from the RF XL Pilot 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 Q1 2023, upon inspection of the subsurface components of the RF XL system, the Acceleware operations team identified additional opportunities to repair and upgrade certain components. Replacement components were received, quality control tested to electrical and mechanical specifications and are now ready for installation.
- In Q1 2023 oil production resumed, however production is shut in whenever workover operations are ongoing at site.

In addition, strategic and financial highlights since the beginning of 2023 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 hydrogen production via methane pyrolysis, utilizing Acceleware’s CTI and Aurora’s unique reactor. Negotiations with Aurora regarding project execution are underway.

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

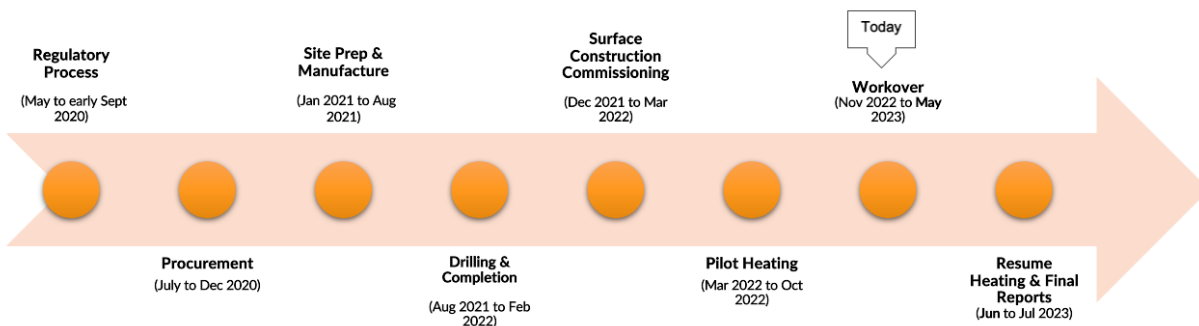
- Acceleware continued to invest in developing and protecting new intellectual property with the total number of patents issued, allowed, applied for, or in development growing from 44 at the end of 2022 to a total of 50 now.

The Company now has 18 patents granted or allowed to protect various proprietary technologies related to Acceleware’s intellectual property, and 32 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.

Acceleware also continues to focus on driving external awareness of the Company and on positioning its RF heating and CTI technology more prominently within both the oil and gas and clean-tech communities. 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 Acceleware’s engineering team. The collection of videos is available for viewing here: [Acceleware Video Posts](#). Acceleware will be presenting at the [Global Energy Show in Calgary](#) in June 2023.

### RF XL PILOT UPDATE

In July 2022, Acceleware’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. The Company also took the opportunity with a workover to remove and inspect certain downhole components of the RF XL system.



Pump started on March 1<sup>st</sup>, 2022, and Power initialized on March 3<sup>rd</sup>, 2022

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. These replacement components

were received, quality control tested for electrical and mechanical specifications and are ready for installation. As of the date of this MD&A, the operations team, together with service providers, are testing tooling and materials that are expected to be deployed during the repair and redeployment activities.

During the workover execution, Acceleware took advantage of the downtime to inspect removable and non-removable components of the downhole system. These inspection activities included visual inspection, measurements, downhole video and other techniques to get more detailed information on the status of the components. The engineering team identified several opportunities to improve the performance of the system, and a few problems with the well that need repair. These improvement opportunities and repairs would not have been possible without stopping operations and performing detailed inspection of the components.

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.\*

While downhole operations carry a degree of risk, Acceleware has worked to mitigate that risk by developing a plan using standard downhole 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. Completion of the remaining workover tasks is expected to result in increased power injected into the reservoir, and in turn a meaningful increase in reservoir temperature within a few months of resuming heating. 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 \$1 million to the net cost of the RF XL Pilot from \$26 million to \$27 million. Net cost includes estimated gross costs of \$27 million to \$28 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. 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 May 23, 2023, 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

Overall spending in Q1 2023 remained conservative as the Company continued to determine thoughtful and cost-conscious next steps in the workover for the RF XL Pilot. Construction work on the RF XL Pilot was completed in early March 2022, followed by commencement of operations which continued throughout most of 2022. A workover program began in late 2022 and continues to date. RF XL Pilot expenses as at March 31, 2023 were approximately \$26.7 million (December 31, 2022 - \$25.9 million). The remaining cash committed but not yet received from SDTC and ERA, including holdbacks receivable was \$0.5 million as at March 31, 2023 (December 31, 2022 – \$1.0 million receivable from SDTC, ERA and Alberta Innovates) and amounts committed but not yet received or receivable from three major oil-sands producers were \$1.4 million as at March 31, 2023 (December 31, 2022 – \$1.4 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 entertainment and other discretionary spending, and
- implementing flexible terms of engagement with contractors and employees.

## QUARTER IN REVIEW

Revenue of \$0.1 million was generated in the three months ended March 31, 2023 compared to \$0.1 million in the three months ended March 31, 2022 (“Q1 2022”) and \$0.1 million in the previous quarter ended December 31, 2022 (“Q4 2022”). Revenue in Q1 2023 included consulting services revenue as well as software and maintenance revenue. Revenue continues to be lower for the HPC segment due to less demand for FDTD and seismic software. Acceleware did not receive any data revenue payments during Q1 2023 for the RF XL Pilot compared to \$0.4 million in Q1 2022 and \$0.2 million in Q4 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 Q1 2023 was \$0.3 million compared to a comprehensive loss of \$1.9 million for Q1 2022 and a comprehensive loss of \$1.3 million for Q4 2022. Comprehensive loss in Q1 2023 and Q4 2022 was impacted by changes in value of the 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 were lower in Q1 2023 and Q4 2022 compared to Q1 2022 due to a lower level of operating activity on the RF XL Pilot during the workover.

Gross R&D expenses incurred in Q1 2023 were \$0.8 million compared to gross R&D expenses in Q1 2022 of \$2.6 million and \$1.2 million in Q4 2022. R&D spending was lower in Q1 2023 compared to Q1 2022 as the Company was completing the final construction stage of the RF XL Pilot in Q1 2022. R&D expenses were lower in Q1 2023 as compared to Q4 2022 due to a lower level of activity on the workover. Additionally, there were fluctuations in recognized government assistance. The Government of Alberta’s Innovation Employment Grant (“IEG”) to support research and development was 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, claimed eligible R&D expenditures for 2021 and received and recognized \$0.4 million in Q1 2023. In Q4 2022 there was \$0.9 million government assistance received and recognized related to the workover and \$1.1 million government assistance recognized in Q1 2022 related to the RF XL Pilot. Government assistance offsets gross R&D costs.

General and administrative (“G&A”) expenses incurred in Q1 2023 were \$0.3 million compared to \$0.5 million in Q1 2022 and \$0.6 million in Q4 2022. There were additional legal and professional fees incurred in connection with the private placements in Q1 2022 and Q4 2022. Additionally, non-cash payroll related costs were lower in Q1 2023 compared to Q1 2022 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 units offering private placement in Q4 2022, both of which included common share purchase warrants. However, 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. As more history and experience with the RF XL Pilot is generated, the Company will work to secure additional demonstration sites for RF XL.

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 to 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 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 and investment. 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 has worked 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.

## 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 March 31, 2023.

	2023	2022				2021		
	Q1	Q4	Q3	Q2	Q1	Q4	Q3	Q2
Revenue	\$103,547	\$73,056	\$53,282	\$119,548	\$82,407	\$87,031	\$297,226	\$97,408
Cash generated (used) in operating activities	(344,062)	(613,464)	(216,211)	(2,351,313)	(1,401,272)	(1,440,665)	(211,875)	(467,445)
Total comprehensive loss for the period	(255,617)	(1,345,913)	(1,000,346)	(891,033)	(1,904,876)	(1,755,118)	(1,103,068)	(721,632)
Loss per share basic and diluted	(\$0.002)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.02)	(\$0.02)	(\$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 MARCH 31, 2023

Revenue	Three months ended March 31, 2023	Three months ended March 31, 2022	Three months ended December 31, 2022	% change Q1 2023 over Q1 2022	% change Q1 2023 over Q4 2022
Software	\$ 19,180	\$ 17,639	\$ 6,365	9%	201%
Maintenance	36,867	64,768	43,691	-43%	-16%
Services	47,500	-	23,000	NA	107%
	\$ 103,547	\$ 82,407	\$ 73,056	26%	42%

Revenue was \$103,547 in Q1 2023, the highest quarterly revenue recorded since Q2 2022 and 26% higher compared to \$82,407 in Q1 2022 and 42% higher compared to \$73,256 in Q4 2022. The increases over Q1 2022 and Q4 2022 were driven mainly by increased revenue for services in the RF Heating segment and fluctuations for maintenance revenue in HPC segment.

RF Heating Revenue	Three months ended March 31, 2023	Three months ended March 31, 2022	Three months ended December 31, 2022	% change Q1 2023 over Q1 2022	% change Q1 2023 over Q4 2022
Maintenance	4,500	-	4,500	N/A	0%
Services	47,500	-	23,000	N/A	107%
	\$ 52,000	\$ -	\$ 27,500	N/A	89%

RF Heating revenue was \$52,000 in Q1 2023 compared to nil in Q1 2022 and \$27,500 in Q4 2022 due to higher services revenue for RF simulation and experimental studies paid by customers interested in applying CTI for their industrial heating needs.

<b>HPC Revenue</b>	<b>Three months ended March 31, 2023</b>	Three months ended March 31, 2022	Three months ended December 31, 2022	% change Q1 2023 over Q1 2022	% change Q1 2023 over Q4 2022
Software	\$ 19,180	17,639	\$ 6,365	9%	201%
Maintenance	32,367	64,768	39,191	-50%	-17%
	\$ 51,547	82,407	\$ 45,556	-37%	13%

HPC revenue was \$51,547 in Q1 2023 compared to \$82,407 in Q1 2022 and \$45,556 in Q4 2022. Revenue was 37% lower in Q1 2023 compared to Q1 2022 and only modestly higher than Q4 2022 due to less demand for the Company's HPC software.

<b>Expenses</b>	<b>Three months ended March 31, 2023</b>	Three months ended March 31, 2022	Three months ended December 31, 2022	% change Q1 2023 over Q1 2022	% change Q1 2023 over Q4 2022
General & administrative	\$ 322,939	473,656	573,353	-32%	-44%
Research & development	318,345	1,512,124	319,552	-79%	0%
	\$ 641,284	\$ 1,985,780	\$ 892,905	-68%	-28%

Expenses were \$641,284 in Q1 2023, 68% lower compared to \$1,985,780 in Q1 2022 and 28% lower compared to \$892,905 in Q4 2022. R&D expenses were lower due to a lower level of operating activity on the RF XL Pilot during the workover. Impacting R&D expenses were fluctuating levels of recognized government assistance. There was \$0.4 million recognized in Q1 2023 compared with \$0.9 million recognized in Q4 2022 and \$1.1 million recognized in Q1 2022. Included in government assistance in Q1 2023 is an amount received from the Innovation Employment Grant program of the Government of Alberta. G&A expenses were higher in Q4 2022 and Q1 2022 due to additional legal and professional fees related to the private placements.

<b>RF Heating Expenses</b>	<b>Three months ended March 31, 2023</b>	Three months ended March 31, 2022	Three months ended December 31, 2022	% change Q1 2023 over Q1 2022	% change Q1 2023 over Q4 2022
General & administrative	\$ 290,179	357,563	473,118	-19%	-39%
Research & development	318,345	1,512,124	319,552	-79%	-0%
	\$ 608,524	\$ 1,869,687	\$ 792,670	-67%	-23%

RF Heating expenses were \$608,524 in Q1 2023, 67% lower compared to \$1,869,687 in Q1 2022 and 23% lower compared to \$792,670 in Q4 2022. During Q1 2022 the Company completed construction of the RF XL Pilot as compared to Q1 2023 and Q4 2022 when the Company was performing a workover. G&A expenses were lower compared to Q4 2022 and Q1 2022 due to additional legal and professional costs for private placements in 2022 and fluctuations in non-cash payroll related costs.

<b>HPC Expenses</b>	<b>Three months ended March 31, 2023</b>	Three months ended March 31, 2022	Three months ended December 31, 2022	% change Q1 2023 over Q1 2022	% change Q1 2023 over Q4 2022
General & administrative	\$ 32,760	116,093	100,235	-72%	-67%

HPC expenses were \$32,760 in Q1 2023, 72% lower compared to \$116,093 in Q1 2022 and 67% lower compared to \$100,235 in Q4 2022. G&A expenses were lower as the Company was focused on the RF XL Pilot.

## LIQUIDITY AND CAPITAL RESOURCES

At March 31, 2023, Acceleware had negative working capital of \$1,015,767 (December 31, 2022 – negative working capital of \$635,642), \$1,004,414 in cash and cash equivalents (December 31, 2022 - \$1,146,468), and \$78,919 in combined short-term and long-term lease obligations (December 31, 2022 - \$91,355). As of March 31, 2023, 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 March 31, 2023 (December 31, 2022 – \$4,350,000). 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 \$344,062 for the three months ended March 31, 2023 compared to cash flows used in operations of \$1,401,272 for the three months ended March 31, 2022. Cash used in operations before changes in non-cash working capital was \$494,925 for Q1 2023 compared to cash used in operations before changes in non-cash working capital of \$1,677,211 in Q1 2022.

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 of the debentures for a 24-month period following the issuance of the debentures. Net proceeds from the offering were 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

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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

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 were 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 March 31, 2023 decreased to \$592,161, compared to \$1,034,940 as at December 31, 2022 due to payments of government assistance receivable for work completed on the RF XL Pilot. The Company maintains in 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 March 31, 2023, the Company had current liabilities of \$2,884,661 compared to current liabilities of \$3,080,375 as at December 31, 2022. The change in current liabilities is due to timing of payment of trade payables for the RF XL Pilot.

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

As at March 31, 2023, the Company had non-current liabilities of \$6,228,630 compared to \$6,607,471 as at December 31, 2022. The decrease is due to unrealized gains in the value of the derivatives of the convertible debt offered in 2022.

#### ***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 March 31, 2023, 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.

The Government of 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, claimed eligible R&D expenditures for 2021 and received payment in Q1 2023. No amounts have been recorded as receivable for 2022 as at March 31, 2023 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. There have been no material changes in any risks or uncertainties facing the Company since December 31, 2022. A discussion of risks affecting the Company and its business is set forth under the heading Risk Factors and Uncertainties in Management's Discussion and Analysis for the year ended December 31, 2022.

### **TRANSACTIONS WITH RELATED PARTIES**

For the three months ended March 31, 2023, the Company incurred expenses in the amount of \$45,938 (three months ended March 31, 2022 - \$45,938) 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 March 31, 2023, \$203,902 was included in accounts payable and accrued liabilities (December 31, 2022 - \$206,902). These fees were incurred in the normal course of operations and in the opinion of Management represent fair value for services rendered.

For the three months ended March 31, 2023, the Company incurred expenses in the amount of \$11,405 (three months ended March 31, 2022 - \$26,902) 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 March 31, 2023, \$11,973 (December 31, 2022 - \$16,670) 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 three months ended March 31, 2023, the Company incurred expenses in the amount of \$36,000 (three months ended March 31, 2022 - \$36,000) 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 March 31, 2023, \$12,600 was included in accounts payable and accrued liabilities (December 31, 2022 - \$44,750). 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>2023</b>		<b>2022</b>
Salaries and short-term employee benefits	\$	<b>218,140</b>	\$	267,678
Share-based payments		<b>26,901</b>		70,033
	<b>\$</b>	<b>245,041</b>	<b>\$</b>	<b>337,711</b>

#### **CRITICAL ACCOUNTING ESTIMATES AND SIGNIFICANT ACCOUNTING POLICIES**

The Management's Discussion and Analysis for the year ended December 31, 2022 outlined critical accounting estimates and significant accounting policies including key estimates and assumptions that Management has made under these estimates and policies and how they affect the amounts reported in the financial statements. During the quarter, there have been no material changes in methodologies or assumptions for key estimates or changes in significant accounting policies used in the preparation of the condensed interim financial statements from those disclosed in the Company's financial statements for the year ended December 31, 2022.

#### **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	116,277,007
Stock Options	11,234,998



**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>Three Months Ended March 31, 2023</b>	<b>Three Months Ended March 31, 2022</b>
Salaries	<b>262,622</b>	\$ 211,916
Consulting	<b>100,698</b>	198,401
R&D supplies and materials	<b>358,395</b>	2,160,475
Share-based payments	<b>12,075</b>	26,865
Depreciation	<b>13,485</b>	13,485
Rent and overhead Allocation	<b>5,093</b>	11,825
Government assistance	<b>(434,023)</b>	(1,110,843)
<b>Total</b>	<b>318,345</b>	\$ 1,512,124

<b>General and Administration</b>	<b>Three Months Ended March 31, 2023</b>	<b>Three Months Ended March 31, 2022</b>
Salaries	<b>143,731</b>	\$ 160,541
Professional Fees	<b>41,145</b>	56,498
Share Based Payments	<b>464</b>	8,991
Rent, Office and Public Company Fees	<b>20,372</b>	74,806
Marketing	<b>70,289</b>	91,046
Depreciation	<b>5,093</b>	11,825
Travel	<b>41,845</b>	69,949
<b>Total</b>	<b>322,939</b>	\$ 473,656