Nano One Materials Corp.

Management's Discussion & Analysis

For the year ended

December 31, 2022

PREPARATION OF MANAGEMENT'S DISCUSSION & ANALYSIS

The following Management's Discussion & Analysis ("MD&A") of Nano One® Materials Corp. ("Nano One" or the "Company") for the year ended December 31, 2022, should be read in conjunction with the Company's annual audited consolidated financial statements for the year ended December 31, 2022 and 2021 (the "financial statements") and related notes thereto. The financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). All monetary amounts in this MD&A are expressed in Canadian dollars, unless otherwise indicated.

The information contained herein is presented as at **March 29, 2023** (the "MD&A Date"), unless otherwise indicated.

Additional information relating to the Company, including the Annual Information Form ("AIF") dated March 29, 2023, is filed with Canadian securities regulatory authorities on SEDAR (www.sedar.com) and on the Company's website at www.nanoone.ca.

On July 26, 2022, the Company conducted a Webcast Corporate Presentation which can be viewed at the following weblink: https://nanoone.ca/annual-meeting-presentation-2022/.

The Company's head office is located at Unit 101B, 8575 Government Street, Burnaby, British Columbia V3N 4V1 and its registered and records office is located at 2900 - 550 Burrard Street, Vancouver, British Columbia V6C 0A3.

For the purposes of preparing this MD&A, Management, in conjunction with the Board of Directors, considers the materiality of information. Information is considered material if: (i) such information results in, or would reasonably be expected to result in, a significant change in the market price or value of Nano One's common shares; or (ii) there is a substantial likelihood that a reasonable investor would consider it important in making an investment decision; or (iii) it would significantly alter the total mix of information available to investors. Management, in conjunction with the Board of Directors, evaluates materiality with reference to all relevant circumstances, including potential market sensitivity.

DISCLOSURE CONTROLS AND PROCEDURES AND INTERNAL CONTROLS OVER FINANCIAL REPORTING

The Company's disclosure controls, and procedures ("DC&P") are designed to provide reasonable assurance that relevant information is gathered and reported to senior management, including the Chief Executive Officer and the Chief Financial Officer, on a timely basis so that appropriate decisions can be made regarding public disclosures. We have also designed internal controls over financial reporting to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. During the years ended December 31, 2022 and December 31, 2021, there were no changes in internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

FORWARD-LOOKING STATEMENTS

This MD&A contains certain "forward-looking information" and "forward-looking statements" (collectively, "forward-looking statements"), within the meaning of applicable Canadian securities laws, which are based upon the Company's current internal expectations, estimates, projections, assumptions, and beliefs. All information, other than statements of historical facts, included in this MD&A that addresses activities, events or developments that the Company expects or anticipates will or may occur in the future is forward-looking information. Such statements can be identified by the use of forward-looking terminology such as "expect", "likely", "may", "will", "should", "intend", or "anticipate", "potential", "proposed", "estimate" and other similar words, including negative and grammatical variations thereof, or statements that certain events or conditions "may" or "will" happen, or by discussions of strategy. Forward-looking statements include estimates, plans, expectations, opinions, forecasts, projections, targets, guidance, or other statements that are not statements of fact. Such forward-looking statements are made as of the date of this MD&A and, except as required by law, the Company is under no obligation to update or alter any forward-looking information.

Forward-looking statements in this MD&A may include, but are not limited to, statements with respect to: the use of the net proceeds from previous financings; the Company's ability to access future financing opportunities; operating and capital costs; the Company's future business and strategies; requirements for additional capital and future financing; estimated future working capital, funds available, and uses of funds, and future capital expenditures and other expenses for specific operations, intellectual property protection; industry demand; ability to obtain employees, consultants or advisors with specialized skills and knowledge; anticipated joint development programs; incurrence of costs; competitive conditions; general economic conditions; the intention to grow the business, operations and potential activities of the Company; the functions and intended benefits of Nano One's technology and products; the development of the Company's technology and products; the commencement of a commercialization phase and entering into a definitive agreement with a party to plan,

design, finance, construct and operate a cathode production facility; the Company's research and development programs; collaboration with material producers; the Company's business plans and strategies; the Company's short and long-term business objectives and milestones and the events that must occur to accomplish them; prospective partnerships and the anticipated benefits of the Company's partnerships; the Company's licensing, supply chain, joint venture opportunities and potential royalty arrangements; the purpose for expanding its facilities; and scalability of developed technology. Although the Company believes that the expectations reflected in the forward-looking statements are reasonable, there can be no assurance that such expectations will prove to be correct. The Company cannot guarantee future results, levels of activity, performance, or achievements. There are risks, uncertainties, and other factors, some of which are beyond the Company's control, which could cause actual results, performance, or achievements of the Company, as applicable, to differ materially from any future results, performance or achievements expressed or implied by such forward-looking statements contained in this MD&A.

RISKS AND UNCERTAINTIES

Risk is inherent in all business activities and cannot be entirely eliminated. An investment in Nano One's common shares involves risk. Investors should carefully consider the risks and uncertainties described below and, in the AIF, filed with Canadian securities regulators (www.sedar.com) which may not be a comprehensive list of risks and uncertainties. Additional risks and uncertainties, including those unknown by the Company at this time, or are currently considered immaterial, may exist, and other risks may apply.

Global Pandemic (COVID-19)

There are many external factors that can adversely affect general workforces, economies, and financial markets globally. Examples include, but are not limited to, the COVID-19 global pandemic and political conflict in other regions. It is not possible for the Company to predict the duration or magnitude of adverse results of such external factors and their effect on the Company's business or ability to raise funds.

DESCRIPTION OF THE BUSINESS

The Company has developed, patented, and is scaling up an innovative One-Pot Process for the production of cathode active materials ("CAM") for lithium-ion battery applications in electric vehicles, energy storage systems, and consumer electronics. Nano One has proven its technology in the laboratory, built a 1 tonne per annum ("tpa") R&D pilot plant, and is partnering with key automotive OEMs, cell manufacturers, cathode manufacturers and the upstream miners/refiners. The acquisition and conversion of the Candiac facility in Québec to the One-Pot process will accelerate the Company's path to commercialization with the aim of starting commissioning in Q3 2023 for industrial pilot scale LFP production. One-Pot trials have started, and unused equipment is being decommissioned. The Candiac team and facility have been successfully integrated into the larger business of the Company, with the focus now shifting towards post-merger activities.

The Company is focused on meeting market demand while harnessing government support. It is the Company's intention to use Candiac as an industrial scale LFP pilot facility that supports the design, engineering, and construction of a commercial demo "blueprint" LFP plant on the adjacent available land. This blueprint plant will have at least one production line that will serve expansion efforts for large multi-line production facilities under a hybrid business model that includes licensing, joint venture and independent production in Canada, USA, Europe, Indo-Pacific region, and other emerging battery jurisdictions. This strategy is aimed at serving outsized demand from the energy storage, mobility, and electric vehicle markets.

Nano One's technology is intended to improve the performance and cost of cathode materials, reduce complexity and excess waste in the supply chain, minimize carbon footprint and simplify production using environmentally sustainable processes. It is a manufacturing platform suited to many types of lithium-ion CAM, which may be used in automotive, energy storage and consumer electronic batteries, including standard, advanced, and next generation solid state batteries.

One-Pot Process Technology

Nano One's One-Pot Process is engineered to use non-sulfate forms of metal feedstock, with the intention of reducing total cost and carbon footprint of feedstock needs per kilogram of CAM, eliminating the need to convert metal to sulphate, thereby removing downstream sulphate waste equivalent to nearly two times the CAM product volume and it reduces water consumption, GHG emissions and process costs. Furthermore, the process uses lithium feedstock in the form of carbonate, for all CAM formulations, rather than hydroxide which is more costly, corrosive and harder-to-handle. The One-Pot technology can also utilize lithium hydroxide and provides flexibility with other feedstock to enable improved optionality of sourcing of raw materials. The process also forms innovative coated nanocrystal cathode powders that are designed to be more durable than conventional cathode powders.

The nanocrystal innovation addresses a fundamental battery trade-off between energy density and durability. Increased durability provides electric vehicle manufacturers greater flexibility in optimizing range, charging rates, safety, and cost. The One-Pot Process combines all input components: lithium, metals, additives/dopants, and coatings in a single reaction to produce a precursor that, when dried and fired, forms quickly into a single nanocrystal cathode material simultaneously with its protective coating.

The Company's primary cathode formulations under development include:

- Lithium Iron Phosphate (LFP);
- Lithium Nickel Manganese Cobalt (NMC622, NMC811, and Ni>90% NMC); and
- Lithium Nickel Manganese Oxide (LNMO, or High Voltage Spinel HVS).

Further details about the Company's process developments and product developments can be found in the AIF.

M2CAM® Technology

Nano One's Metal to Cathode Active Material ("M2CAM") technology reduces cost, reduces waste, and reduces the carbon footprint in the lithium-ion battery supply chain. Nano One's collaborators include automotive OEMs with similar motivations to meet environmental targets by reducing waste, carbon emissions, logistics and costs. Patents are pending for M2CAM.

Nano One's patented One-Pot Process forms durable single crystal cathode powders and protective coatings simultaneously and the process has been adapted for M2CAM, enabling these cathode materials to be made directly from metal powders. Metal powders are one-fifth of the weight of metal sulfates, avoiding the added costs, energy, and environmental impact of converting to sulfate and shipping and handling of waste. The One-Pot Process is an aqueous process, using carbon neutral chemistry, that operates at room-temperature and atmospheric pressures, and it combines all cathode and coating feedstocks in one reaction to form an intermediate powder that is easily processed in kilns to form a finished and coated cathode powder. This creates added value for metals and aligns Nano One with the environmental, sustainability and cost objectives of automotive companies, miners, investment communities and governmental infrastructure initiatives.

CHANGE IN EXECUTIVE OFFICERS AND BOARD OF DIRECTORS

Effective November 1, 2022, Denis Geoffroy was appointed Chief Commercialization Officer. The announcement was made in connection with the announcement on closing of the acquisition of Johnson Matthey Battery Materials Ltd. (see below).

Effective June 15, 2022, Lisa Skakun was appointed to the Board of Directors as an independent Director.

RECENT CORPORATE MILESTONES

Completion of Cathode Evaluation Project & Expansion of Collaboration with Automotive OEM

On February 21, 2023, the Company announced that it has achieved an important milestone by successfully completing the evaluation and benchmarking of its process, cathode materials and techno-economic modelling, under a Cathode Evaluation Agreement with a global automotive manufacturer. Success has led the parties to a new Cathode Evaluation Agreement that adds LFP to the program and expands their collaboration to target performance, cost, and environmental specifications of cathode materials to meet the needs of the OEM.

Key highlights of project achievements include:

- Successful completion of project objectives, advances relationship.
- Demonstrates significant potential to reduce environmental footprint, capital costs, and operating costs for NMC materials.
- Meets performance targets.
- Increases confidence in long term strategic potential.
- Led to a new evaluation agreement that adds LFP to the program and expands validation of Nano One's technology to meet specific needs of the OEM.
- Parties developing a roadmap to execute on vision.

The parties jointly evaluated Nano One's NMC cathode materials for use in automotive lithium-ion batteries and demonstrated significant potential to reduce environmental footprint, capital costs and operating costs while meeting performance criteria.

As part of the initial evaluation project, a third-party study, conducted by engineering firm Hatch Ltd., outlined that Nano One's patented One-Pot and M2CAM (metal to cathode active material) processes offer significant environmental benefits and cost advantages when compared to conventional cathode processes. The report also identified opportunities for further optimization and cost savings during scale-up and commercialization.

The successful outcome of this initial evaluation project has led to Nano One and its automotive partner entering a new phase of collaboration and a second Cathode Evaluation Agreement, during which the parties will expand their evaluation and focus on specific performance, cost, and environmental parameters for NMC and LFP materials. In addition, Nano One and its automotive partner are developing a roadmap to execute on a joint vision to promote waste-free high-performing cathodes in world class cells. The joint vision aligns with Canadian and US government initiatives and the underlying objectives of the recent Inflation Reduction Act.

New program funding from SDTC

On February 13, 2023, the Company announced an award of $10,000,000 in non-dilutive, non-repayable contributions from Sustainable Development Technology Canada ("SDTC"). These funds will support the conversion of Nano One's recently acquired Candiac facility to the patented One-Pot Process for industrial-scale pilot production of LFP and includes financial support for the design, construction, and operation of a multi-cathode piloting hub (MCPH) to help customize and advance Nano One's One-Pot and metal-direct-to-CAM (M2CAM) processes for the industrial scale pilot production of next-gen LFP, NMC and LNM cathode active materials (CAM). SDTC's continued support has been an important contribution to Nano One's success and will accelerate the LFP piloting while advancing the plan towards commercial operations.

This project named, "*Pre-Commercial Trial and Multi Cathode Piloting Hub"*, will be multi-phase, multi-year, and milestone driven. This follows two other successful Nano One SDTC projects which assisted in demonstrating the One-Pot Process at small pilot scale production volumes and advanced the technology to this point of pre-commercial trials. This project also leverages Nano One's recent high-value acquisition of the JMBM Canada LFP facility in Candiac, Québec, Canada, on November 1, 2022 (see below). It amplifies the opportunity for global LFP business expansion and is further validated by the support of the federal government and the project's industrial consortium partners (Rio Tinto, Lithion Battery Inc., and undisclosed automotive OEM). The Company's project in Candiac is further enhanced by a team with deep technology commercialization experience, scale-up know-how, and automotive quality CAM production expertise, all led by a seasoned executive team.

Joint Development Agreement – Umicore

On December 21, 2022, the Company announced the signing of a joint development agreement ("JDA") with Umicore, a circular materials technology company. Under the JDA, the companies will co-develop production process technologies for CAM for lithium-ion batteries. Under the JDA, Umicore will evaluate Nano One's patented One-Pot M2CAM Process technology with the intention to integrate it with Umicore's proprietary process technology for the production of high-nickel NMC CAM. With the JDA, both parties aim to leverage their respective technologies and know-how to further increase the throughput rate while reducing the costs and environmental footprint of CAM production.

Acquisition of Johnson Matthey Battery Materials Ltd.

On November 1, 2022, the Company announced the closing of the acquisition of Johnson Matthey Battery Materials Ltd. ("JMBM Canada"), a Canadian entity located in Candiac, Québec, previously announced on May 25, 2022, pursuant to a definitive agreement signed on May 24, 2022. The Company paid cash consideration of $10,250,000, plus working capital items totalling $5,750,000, and incurred transaction costs (legal fees) of $352,993, for aggregate consideration of $16,352,993 as detailed below.

The acquisition of JMBM Canada constitutes an asset acquisition and has been accounted for under the acquisition method in accordance with the guidance provided in IFRS 3, *Business Combinations* ("IFRS 3"). The allocation of the purchase price to the assets acquired and liabilities assumed is based on estimated fair values at the acquisition date.

JMBM Canada's assets, liabilities, and operations from November 1, 2022, are included in the financial statements.

Net assets (liabilities) of JMBM acquired:	November 1, 2022 $
Cash	179,642
Receivables and prepayments	7,115,699
Property, plant and equipment:	
Production and research equipment	2,445,257
Information technology equipment	19,117
Building	4,874,961
Land	3,263,658
Accounts payable and accrued liabilities	(1,545,341)
Net assets acquired	**16,352,993**

Consideration paid on asset acquisition:	$
Cash	16,000,000
Transaction costs - cash	352,993
Total consideration paid	**16,352,993**

As the acquisition constituted an asset acquisition, the consideration paid was allocated on a pro rata basis to the fair values of the assets and liabilities acquired. Accordingly, the amount recognized within the financial statements for property, plant and equipment amounted to $10,602,993. Moreover, the Company engaged an arm's-length appraiser to estimate fair value information whereby the fair value of the property (land and building) was determined to be approximately $25,000,000, and the fair value (under the ordinary liquidation value (OLV) method) of the equipment acquired amounted to approximately $7,500,000.

The Acquisition expedites Nano One's business strategy for LFP and other battery materials, and includes:

- A talented and dedicated workforce of 46 professionals with almost 400 years of scale-up, commercialization, and cathode manufacturing know-how on LFP.
- The only existing North American LFP production facility.
- An 80,000 square foot, 2,400 tpa capacity LFP production facility on 9.5 acres, strategically located near Montréal.
- Certification systems supplying tier 1 cell manufacturers for the automotive sector.

The Company will begin with trials in the Candiac facility to validate the production of LFP using the Company's patented One-Pot Process. Results from these trials will drive business, commercial and plant conversion decisions in 2023. In support of these post-closing activities, Nano One has been planning, engineering, and developing business channels for many months already with its team. This will enable the newly expanded company to move quickly.

Nano One has done extensive analyses of the techno-economics, critical minerals, carbon footprint and environmental impact of its One-Pot Process. The Company believes there is a significant opportunity to differentiate both economically and environmentally, and to create a sustainably robust and secure supply chain to serve various markets.

The Company is focused on meeting market demand while harnessing government support. It is the Company's intention, to use Candiac an industrial scale LFP pilot facility that supports the design, engineering and construction of as a commercial demo "blueprint" LFP plant on the adjacent available land. This blueprint plant will have at least one production line that will serve expansion efforts for large multi-line production facilities under a hybrid business model that includes licensing, joint venture and independent production in Canada, USA, Europe, Indo-Pacific region and other emerging battery jurisdictions. This strategy is aimed at serving outsized demand from the energy storage, mobility, and electric vehicle markets.

The Candiac production facility has been in operation since 2012 and was acquired by Johnson Matthey in 2015. It has been a supplier of LFP cathode material to the lithium-ion battery sector for both automotive and non-automotive applications for a select group of customers, globally. Strategically located in Candiac, Québec, it has the benefit of access to a rapidly developing North American ecosystem which will serve the broader global community with cost-effective, resilient, and environmentally sustainable cathode materials. The plant and team are strategically aligned with Canada's "Mines to Mobility" initiative.

Strategic Investment by Rio Tinto

On June 9, 2022, the Company announced entering a strategic partnership with Rio Tinto, a leading global mining and metals group, providing iron and lithium products, collaboration and a US$10,000,000 ($12,536,500) investment into Nano One. This partnership and funding accelerates Nano One's multi-cathode (multi-CAM) commercialization strategy and support CAM manufacturing in Canada for a cleaner and more efficient battery supply chain for North American and overseas markets.

Nano One issued 4,643,148 common shares (the "Shares") to Rio Tinto, approximately 4.9% of the issued and outstanding Shares of Nano One at the time of the share issuance, at $2.70 per share in a non-brokered private placement. Nano One also issued 1,000,000 share purchase warrants to Rio Tinto in respect of a Strategic Collaboration Agreement as described below.

The proceeds are being used for technology and supply chain development, commercialization, the acquisition of JMBM Canada (completed, see above), its conversion to One-Pot Process LFP and industrial scale piloting of other Nano One CAM technologies, and for working capital purposes.

Provisions of the investment agreement with Rio Tinto include participation rights in any future equity financings to maintain pro rata ownership interest for a period of five years from the date of closing; a lock up on securities dispositions and a standstill for a period of 12 months to June 16, 2027, subject to certain exemptions.

Strategic Collaboration Agreement – Rio Tinto

Rio Tinto and Nano One entered into a strategic collaboration agreement that includes a study of Rio Tinto's battery metal products, including iron powders from the Rio Tinto Fer et Titane facility in Sorel-Tracy, Québec, as feedstock for the production of Nano One's cathode materials. Rio Tinto will contribute know-how from its Critical Minerals and Technology Centre, which has developed a unique expertise in the extraction and processing of critical minerals such as lithium and scandium, as well as minerals from Canada, the United States, and other international sources to further drive localization of the lithium-ion battery value chain.

Rio Tinto will collaborate on technical, and business matters as may be required in developing, designing, constructing, and operating cathode production facilities.

Nano One issued 1,000,000 share purchase warrants to Rio Tinto as consideration for their technical and support services. The warrants are exercisable at $4.00 each until June 16, 2023.

Joint Development Agreement - BASF

On May 31, 2022, the Company announced the signing of a JDA with BASF SE (“BASF”), a globally active chemical company with extensive experience in the development and manufacture of battery materials. Under the JDA, the companies will co-develop a process with reduced by-products for commercial production of next-generation CAM, based on BASF’s HED™-family of advanced CAM and using Nano One’s patented One-Pot Process and M2CAM technologies. BASF has a family of CAM products well-suited to the evolving requirements of batteries in automotive drivetrains and a proven track record of developing these products in collaboration with others. Nano One and BASF will also use the M2CAM process for higher flexibility in terms of manufacturing approach and resulting product performance, reduced energy consumption and environmental footprint.

The joint development plan has various phases and stage gates and is the result of evaluating Nano One’s processes and products. The signing of the JDA represents a significant milestone in the business relationship between BASF and Nano One.

CORPORATE DEVELOPMENTS – YEAR TO DATE

In addition to the recent corporate milestones discussed above and other information discussed throughout this MD&A, the Company announced the following developments during the year ended December 31, 2022, and through to the MD&A Date (from newest to oldest):

Candiac Integration

In January 2023, the Company provided an update on the reorganization of the combined teams, and the transformation of the Candiac LFP facility to the One-Pot Process, following completion of the acquisition on November 1, 2022.

Key highlights include the following:

- One-Pot trials commencing and decommissioning of unused equipment progressing.
- Functional re-organization implemented to align innovation and commercialization centres.

- Completed integration of Candiac team and facility, focus now on post-merger activities.
- Focusing on meeting market demand while harnessing government support.

The Company will be leveraging the deep experience of the Québec operational team, action plans are being implemented to convert the Candiac facility to Nano One's patented One-Pot Process to accelerate the commercialization of Nano One's LFP technology. Candiac assets and know-how will help design turn-key systems to address, and align with, projected global LFP cathode market demand.

LFP trials with the One-Pot technology started in January 2023. Initial plant preparations are complete, including process hazard studies, for the use of the existing commercial scale reactors for larger scale trials which started in Q1 2023. Results from this work will provide Nano One with valuable insights for the next stage of trials, pilot production and advanced engineering. Large One-Pot reactors have been designed and ordered, with installation, integration and commissioning expected in Q3 2023 for industrial pilot scale LFP production. This builds on existing development work and supports evaluation and validation work with potential customers.

Validation of Manganese Metal in M2CAM Process

In September 2022, the companies announced joint demonstration of cathode materials made directly form Euro Manganese sourced electrolytic manganese metal using Nano One's One-Pot Process. Euro Manganese has produced EV grade high-purity electrolytic manganese metal ("HPEMM") from its pilot plant using feedstock from its Chvaletice Manganese Project in the Czech Republic. Nano One's patented One-Pot M2CAM Process.

Results align with automotive battery demands in Europe and North America for sustainably sourced critical minerals and environmentally superior and differentiated supply chains. The two companies are jointly developing economically viable and environmentally sustainable applications of high-purity electrolytic manganese metal ("HPEMM") as one of several inputs for the production of CAM used in lithium-ion batteries. In this first milestone, pilot plant samples from Euro Manganese's Chvaletice Manganese Project have been successfully validated as feedstock for Nano One's patented One-Pot and M2CAM cathode production technologies. This avoids the added cost, complexity, and environmental footprint of using metal sulphates in cathode production.

SDTC and BC-ICE Funding of $1.8M and Grant of Two Patents

In August 2022, the Company announced the granting of two (2) additional patents in Japan and the receipt of approximately $1,800,000 in non-dilutive, non-repayable contributions from SDTC and British Columbia Innovative Clean Energy, Mines and Petroleum Resources ("BC-ICE") toward Milestone 4 (the final milestone) of the *Scaling Advanced Battery Materials project.*

NRC-IRAP Funding to Advance M2CAM and Thermal Processing Initiatives

In March 2022, the Company announced that it will be receiving advisory services and funding of up to $404,000 between 2022 and 2024 (approximately $319,000 was received through to December 31, 2022) from the National Research Council of Canada Industrial Research Assistance Program ("NRC-IRAP") to support a research and development project to advance its M2CAM technology and thermal processing innovations. The project will further advance cost optimization of the One-Pot Process for the manufacture of CAM, specifically as it relates to use in metal feedstocks enabled by Nano One's M2CAM technology and innovations in the final stage of thermal processing.

Successful Completion of Phase One of Co-Development Agreement with Niobium Producer CBMM

In February 2022, the Company announced that it has successfully completed Phase One of its advanced lithium-ion battery cathode materials coating development agreement with CBMM, the world's leading supplier of niobium products and technology. Nano One has successfully demonstrated the use of CBMM's niobium to form a protective coating on Nano One's single nanocrystal NMC cathode active material. This coating is designed to enhance durability, and the success on this first milestone strengthens the supply chain relationship between CBMM and Nano One while providing yet another demonstration of the flexibility of Nano One's patented One-Pot Process.

Nano One's patented One-Pot Process adds a cost-effective niobium coating on each individual nanocrystal to protect the cathode from deleterious side reactions than can otherwise cause rapid performance degradation. The One-Pot Process enables this coating to be formed without adding process steps or costs, and the coating can significantly increase the durability of cathode materials in lithium-ion batteries. The niobium-coated single crystal cathode materials are applicable to both conventional liquid electrolyte cells and advanced solid state electrolyte cells.

Engineering Study Supports the Benefits of the One-Pot Process and M2CAM

In January 2022, the Company announced the successful completion of an industrial scale engineering study conducted by Hatch Ltd. (Hatch) a leading global engineering firm.

The engineering study set out to compare the conventional sulfate process for manufacturing CAM with Nano One's One-Pot M2CAM process for nickel rich cathode materials. Conventional cathode manufacturing produces significantly more weight in sodium sulfate waste than it does in CAM product, whereas Nano One's process produces no waste. It is estimated the One-Pot M2CAM process also reduces water consumption significantly prior to recycling. Further, the Hatch work supports that Nano One's process significantly reduces the number of process steps to get to a nanocrystal coated cathode active material helping reduce costs and create efficiencies. The report estimates competitive economics for Nano One and its One-Pot Process over conventional cathode processes and identifies opportunities for further cost savings.

Intellectual Property

The Company increased its patent portfolio during the year ended December 31, 2022. As at the MD&A Date, the Company has twenty-seven (27) issued patents which were issued by various jurisdictions including Canada, China, Japan, Korea, Taiwan, and the United States. The Company also has several pending patent applications throughout the world.

The intellectual property was developed and is wholly owned by the Company. The Company has filed other patent applications and may file additional patents at a later date to further strengthen its intellectual property and technology going forward, although no assurances can be given that it will be successful in such endeavours. The Company seeks to limit disclosure of its intellectual property by requiring employees, consultants, and partners with access to the technology to execute confidentiality agreements, non-competition agreements, and by restricting access to intellectual property and technology.

Additional information on the Company's intellectual property can be found in the Company's AIF.

Government Assistance

The Company's primary active government assistance programs are that with SDTC, and NRC-IRAP. During the years ended December 31, 2022 and December 31, 2021 the following amounts were received:

	December 31, 2022	December 31, 2021
Amounts received:	**$**	$
Sustainable Development Technology Canada (SDTC)	1,797,824	1,915,359
Industrial Research Assistance Program (NRC-IRAP)	354,361	33,372
	2,152,185	1,948,731

SDTC Scaling Project (active):

In 2019, the Company executed a contribution agreement with SDTC for a non-repayable grant in respect of the Company's "Scaling Advanced Battery Materials" project (SDTC Scaling Project). The SDTC Scaling Project grant is for up to $8,545,500 ($7,742,210 received as at December 31, 2022) which includes BC-ICE contributions. The funds are non-repayable.

National Research Council of Canada's Industrial Research Assistance Program ("NRC-IRAP"):

Between the programs detailed below, the Company received proceeds from NRC-IRAP during the year ended December 31, 2022 of $354,361.

Youth Internship Contribution Agreement (active):

Since May 2021, the Company has entered into various Youth Internship Contribution Agreements with NRC-IRAP. Under the terms of the agreements, the contributions from NRC-IRAP are for the reimbursement of certain salaries paid to employees of the Company.

M2CAM Program (active):

In December 2021, the Company executed an agreement with NRC-IRAP for non-repayable contributions to the Company totalling up to $404,000 ($319,393 received through to December 31, 2022) over the course of the program through to June 2023. The scope of the program is research into cost optimization of the Company's patented process for the manufacture of cathode active materials and specifically the use of metal feedstocks and thermal processing methods (M2CAM). Under the terms of the agreement, NRC-IRAP will reimburse the Company for 80% of salaries paid to employees involved in this project.

The cumulative amount of program funding received since 2014 from the Government of Canada are as follows:

	December 31, 2022	December 31, 2021
	$	$
Sustainable Development Technology Canada (SDTC) and BC-ICE	9,823,507	8,025,683
Automotive Supplier's Innovation Program (ASIP)	1,950,952	1,950,952
Industrial Research Assistance Program (NRC-IRAP)	1,182,699	828,338
Innovation Assistance Program (IAP) (from NRC-IRAP)	241,225	241,225
Scientific Research & Experimental Development (SR&ED)	98,661	98,661
Other Grants	80,059	80,059
	13,377,103	11,224,918

OVERALL PERFORMANCE

Further to the "Recent Corporate Developments" as discussed above, the Company used cash and cash equivalents during the year ended December 31, 2022, of approximately $13,207,000.

The key sources and uses of cash and cash equivalents during the three months and year ended December 31, 2022, were as follows:

	Three months ended	**Year ended**
	December 31, 2022	**December 31, 2022**
	$	**$**
Key sources of cash:		
Strategic investment by Rio Tinto, net of share issue costs	-	12,502,000
Government programs	102,000	2,152,000
Interest income	344,000	924,000
Cost recoveries from strategic partners	72,000	710,000
Exercises of stock options and warrants	327,000	672,000
Key uses of cash:		
Purchase of JMBM, net of cash acquired	(5,923,000)	(16,173,000)
Investments in equipment, patent issuance fees, and deposits	(603,000)	(1,552,000)
Facility lease payments	(62,000)	(220,000)

Cash flows for the year ended December 31, 2022

Further to the information presented above which is primarily in respect of investing and financing activities, the use of cash and cash equivalents in operating activities on a net basis after cost recoveries and government program allocations to operating expenses was approximately $9,361,000, largely driven by $13,282,000 incurred on cash-based operating expenses less approximately $3,921,000 in changes in working capital items. This equates to an average net monthly use of cash in operations of approximately $780,000 for the year ended December 31, 2022, compared to an average monthly net use of cash in operations for the year ended December 31, 2021, of approximately $585,000.

SELECTED ANNUAL INFORMATION

The following table sets out selected historical financial information of Nano One. Such information is derived from the audited financial statements.

	December 31, 2022 $	December 31, 2021 $	December 31, 2020 $
Revenues	**-**	-	-
Loss and comprehensive loss	**(15,820,764)**	(11,323,108)	(5,212,408)
Loss per share - basic and diluted	**(0.16)**	(0.12)	(0.07)
Cash and cash equivalents	**39,445,395**	52,652,258	27,750,290
Total assets	**56,076,360**	55,357,897	30,959,027
Total liabilities	**2,626,991**	1,602,926	2,060,691
Shareholders' equity	**53,449,369**	53,754,971	28,898,336

The Company has incurred an increasing net loss over the last two years in part due to the growth of the Company's operations, personnel, and overall business activity, as well as the consolidation of the operating activities of JMBM Canada which occurred during the latter portion of 2022 (November 2022 onwards). Total assets have fluctuated either as a direct result of cash resources, or the acquisition of JMBM Canada resulting in significant additions to property, plant and equipment during 2022. Total liabilities is primarily attributable to trade and other payables and are routine in nature and grew through the acquisition of JMBM Canada.

DISCUSSION OF OPERATIONS AND FOURTH QUARTER

The Company reports operating results in a single operating segment being the development and scale-up of a patented process for the production of cathode active materials (CAM) for lithium-ion battery applications in electric vehicles, energy storage systems, and consumer electronics.

For the three months and year ended December 31, 2022 and December 31, 2021

The following tables summarize the Company's results of operations and cash flows for the three months and year ended December 31, 2022 and December 31, 2021 (rounded):

	Three months ended		
	December 31, 2022 $	December 31, 2021 $	**Change $**
Revenue	**-**	-	**-**
Loss from operating expenses	**(5,431,000)**	(2,513,000)	**(2,918,000)**
Loss and comprehensive loss	**(5,091,000)**	(2,462,000)	**(2,629,000)**
Cash used in operating activities	**(576,000)**	(2,044,000)	**1,468,000**
Cash used in investing activities	**(6,182,000)**	(70,000)	**(6,112,000)**
Cash provided by financing activities	**266,000**	137,000	**129,000**

	Year ended		
	December 31, 2022 $	December 31, 2021 $	**Change $**
Revenue	**-**	-	**-**
Loss from operating expenses	**(16,741,000)**	(11,391,000)	**(5,350,000)**
Loss and comprehensive loss	**(15,821,000)**	(11,323,000)	**(4,498,000)**
Cash used in operating activities	**(9,361,000)**	(7,019,000)	**(2,342,000)**
Cash (used in) provided by investing activities	**(16,801,000)**	317,000	**(17,118,000)**
Cash provided by financing activities	**12,955,000**	31,604,000	**(18,649,000)**

See above for details on key sources and uses of cash and cash equivalents during the year ended December 31, 2022.

Cash used in investing activities during the year ended December 31, 2022, substantially comprises approximately $16,173,000 paid for the acquisition of JMBM Canada net of transaction costs, and cash acquired from JMBM Canada. The remainder of approximately $627,000 represents purchases and deposits on equipment and machinery, and patent issue fees, net of interest income.

Cash provided by financing activities during the year ended December 31, 2022, is substantially attributable to the proceeds from Rio Tinto's strategic investment by way of private placement, and the exercise of options and warrants, less facility lease payments. The cash provided by financing activities in the comparative period reflects the proceeds from a greater volume of option and warrant exercises, and the closing of a short-form prospectus offering (gross proceeds of approximately $28,917,000).

Successful Conclusion of Joint Development Agreement with Asian Manufacturer

The JDA announced in August 2020 with an Asian cathode manufacturer came to a natural conclusion with the successful demonstration and economic modelling of the Company's One-Pot Process for production of high-performance LNMO cathode materials. The parties will not be advancing to piloting in Asia at this time, partly because there is not yet enough demand for LNMO batteries and partly because of a focus on emerging opportunities to pilot, scale and commercialize in North America. The Company continues to work with several parties on LNMO batteries, is evaluating larger piloting plans at its own facilities, and is well positioned to develop business opportunities with emerging LNMO battery producers.

Research and operational expenses

Amounts for the three months and year ended December 31, 2022 and December 31, 2021 were as follows (rounded):

	Three months ended			Year ended		
	December 31, 2022 $	December 31, 2021 $	**Change $**	**December 31, 2022 $**	December 31, 2021 $	**Change $**
Research and operational expenses	**876,000**	577,000	**299,000**	**2,721,000**	1,395,000	**1,326,000**
Warrants issued for services (Rio Tinto)	**-**	-	**-**	**595,000**	-	**595,000**
Depreciation	**271,000**	159,000	**112,000**	**878,000**	550,000	**328,000**
Cost recoveries	**(72,000)**	(308,000)	**236,000**	**(402,000)**	(614,000)	**212,000**
Government assistance	**(131,000)**	(96,000)	**(35,000)**	**(539,000)**	(603,000)	**64,000**
Research and operational expenses, net	**944,000**	332,000	**612,000**	**3,253,000**	728,000	**2,525,000**

In addition to the research and operational expenses, net amount presented above, the Company incurred approximately $288,000 (before recoveries) during the year ended December 31, 2022, within professional and consulting, for charges relating to patent filings and applications.

Warrants issued for services of $595,000 is a non-cash amount representing the fair value of 1,000,000 warrants issued to Rio Tinto in connection with the strategic collaboration agreement in June 2022 (see "Strategic Investment by Rio Tinto" above).

Certain components of operating expenses for the three months and year ended December 31, 2022 and December 31, 2021, were as follows (rounded):

	Three months ended		
	December 31, 2022	December 31, 2021	**Increase (decrease)**
	$	$	**$**
General and administrative expenses	**534,000**	184,000	**350,000**
Business development and investor relations	**68,000**	234,000	**(166,000)**
Professional and consulting, net	**303,000**	274,000	**29,000**
Wages, benefits, and fees, net	**3,070,000**	1,253,000	**1,817,000**

	Year ended		
	December 31, 2022	December 31, 2021	**Increase (decrease)**
	$	$	**$**
General and administrative expenses	**1,415,000**	886,000	**529,000**
Business development and investor relations	**626,000**	761,000	**(135,000)**
Professional and consulting, net	**1,542,000**	906,000	**636,000**
Wages, benefits, and fees, net	**7,919,000**	3,522,000	**4,397,000**

A notable contribution to the increased operating expenses for the three months ended December 31, 2022, and the year ended December 31, 2022, is the inclusion of operating expenses from November 1, 2022, in relation to the Company's Candiac operations which were approximately $2,308,000 through to December 31, 2022.

- General and administrative expenses:

  The primary cause of the increase is higher insurance premiums for D&O insurance which are amortized over the term of the policy, and increased travel expenses. Insurance amounts expensed during the year ended December 31, 2022, totalled approximately $271,000. The other key components of general and administrative expenses for the year then ended were transfer agent filing and exchange fees, rent, and travel and conferences of approximately $305,000 in aggregate, in addition to expensed computer hardware, software, licenses and products of approximately $155,000.

- Business development and investor relations:

  The Company's business development, and investor relations programs and marketing efforts have remained fairly consistent to date from its programs initiated in 2021. The decrease was due to fewer fees paid to market consultants and corporate advisors.

- Professional and consulting:

  Legal fees totalled approximately $212,000 (decrease of approximately $11,000), however, legal fees incurred in respect of the JMBM Canada acquisition were approximately $353,000 and were capitalized to the fair value of property, plant, and equipment acquired in connection with asset acquisition accounting. Patent filing fees before recoveries increased to approximately $288,000 (increase of approximately $71,000) as a result of greater operational activity overall. Advisory and capital markets services and consultancy increased to approximately $546,000.

- Wages, benefits and fees:

  Personnel levels continued to increase during the year ended December 31, 2022, at the Company's Burnaby operations, plus the addition of more than 40 personnel upon acquiring JMBM Canada on November 1, 2022. Wages, benefits and fees are partially offset by allocations of SDTC government grants.

SUMMARY OF QUARTERLY RESULTS

The following table shows the results for the last eight fiscal quarters as prepared in accordance with IFRS and presented in Canadian dollars, the Company's functional currency:

Period Ending	Revenue $	Loss and comprehensive loss $	Basic and Diluted Loss Per Share $
December 31, 2022	-	(5,090,271)	(0.05)
September 30, 2022	-	(2,002,962)	(0.02)
June 30, 2022	-	(4,415,217)	(0.05)
March 31, 2022	-	(4,312,314)	(0.05)
December 31, 2021	-	(2,462,276)	(0.03)
September 30, 2021	-	(1,767,249)	(0.02)
June 30, 2021	-	(2,549,411)	(0.03)
March 31, 2021	-	(4,544,172)	(0.05)

There are no significant seasonal variations in quarterly results as the Company is not subject to significant seasonality in its research and corporate activities. The Company is exposed to currency risk as it incurs certain transactions in United States dollar, and occasional transactions in the Euro, and the British Pound. However, the Company has assessed that the impact of a 10% fluctuation in foreign exchange rates relative to the Canadian dollar would have impacted the Company's results of operations by approximately $1,680,000.

Variations in loss and comprehensive loss for certain of the above periods were affected primarily by the following factors:

- The quarter ended December 31, 2022, included the acquisition of JMBM Canada (renamed to Nano One Materials Candiac Inc). This acquisition resulted in an increase in overall operating costs as costs associated with the subsidiary's operations were included from November 1, 2022. A primary component is wages and benefits.
- The quarter ended September 30, 2022, included government program proceeds and amortization of deferred government assistance in the amount of $1,208,000.
- The quarter ended March 31, 2022, was characterized by a significant increase in the volume and cost of research activities (excess of $1,000,000 increase over the previous three months ended December 31, 2021) as well as increases in substantially all other cash-based components of operating expenses.
- The quarter ended December 31, 2021, saw an increase in professional fees and consulting fees. Additionally, there were additional fees incurred on engineering studies, and a reduction in amounts recognized as government assistance which are offset to reduce research and operational expenses, net.

Use of Proceeds from Financings

The Company completed the following three equity financings between February 2020 and April 2021, for aggregate net proceeds of $50,411,757:

- On February 21, 2020 (the "First Financing"), the Company completed a non-brokered private placement for gross proceeds of approximately $11,000,000. The net proceeds of the placement after deducting finders' fees, legal, filing, and other fees were $10,381,392;
- On October 29, 2020, the Company completed a short form prospectus financing for gross proceeds of approximately $14,000,000. The net proceeds of the financing after deducting finders' fees, legal, filing and other fees were $13,118,991; and
- On April 1, 2021, the Company completed a short form Prospectus financing for gross proceeds of approximately $29,000,000. The net proceeds of the financing after deducting the cash underwriters' commission and expenses, legal, filing and other fees were $26,911,374.

For the period from closing of the First Financing (February 21, 2020) to December 31, 2022, the Company has used the net proceeds of the financings as shown below. These amounts are presented on a gross basis and do not include government grant proceeds or other cost recoveries.

Principal Purposes	Use of Proceeds $	Budgeted Use of Proceeds $	Variance $
Research activities	4,757,861	5,686,000	(928,139)
Equipment procurement, leasehold improvements	4,867,295	7,832,000	(2,964,705)
Pilot plant expansion	569,722	11,273,000	(10,703,278)
Intellectual property acquisition	717,135	1,472,000	(754,865)
Business development and strategic alternatives (1)	17,282,568	4,190,000	13,092,568
Working capital, including wages and benefits	22,217,176	19,958,757	2,258,419
Proceeds used	**50,411,757**	50,411,757	
Remaining	-	n/a	
Net proceeds of the financings	**50,411,757**	50,411,757	

(1) Includes approximately $16,000,000 for the acquisition of JMBM.

The primary variance between the budgeted use of proceeds and actual use of proceeds is in respect of the Company's business development and strategic alternatives, and pilot plant expansion whereby approximately $16,000,000 (before transaction costs) was used in the acquisition of JMBM Canada (business development and strategic alternatives), and thereby transitioning the Company's focus from pilot plant expansion in Burnaby, to production efforts in Québec.

TRANSACTIONS BETWEEN RELATED PARTIES

Key management personnel are the persons responsible for the planning, directing, and controlling the activities of the Company and includes both executive and non-executive directors, and entities controlled by such persons. The Company considers all directors and officers of the Company to be key management personnel.

The following transactions were carried out with key management (gross before applicable government assistance recoveries):

	Transactions year ended December 31, 2022 $	Transactions year ended December 31, 2021 $	**Balances outstanding December 31, 2022 $**	Balances outstanding December 31, 2021 $
Bedrock Capital	150,000	150,000	-	-
DBM CPA	172,865	117,925	11,844	8,400
Directors' fees	238,521	86,250	-	-
Management and directors' fees (within wages, benefits and fees)	561,386	354,175	11,844	8,400
Wages, benefits and fees (officers)	1,348,197	1,172,800	-	631
Share-based payments (directors and officers)	1,125,228	3,756,185	-	-
Patent Filing Specialists (professional and consulting; and intangible assets)	253,684	188,584	11,795	15,993
	3,288,495	5,471,744	**23,639**	25,024

(a) Professional and consulting, net:

- Includes the services of Patent Filing Specialists Inc. ("Patent Filing Specialists"), a company controlled by Joseph Guy, a Company Director. Transactions are included within both intangible assets (for capitalized patent issue costs) and professional and consulting for patent filings, maintenance and related.

(b) Wages, benefits and fees, net (including allocations to research and operational expenses, net):

- Includes salaries and short-term variable cash-based compensation incentives paid to Dan Blondal, CEO, Stephen Campbell, CTO, John Lando, former President until November 30, 2021, Alex Holmes, COO, Pamela Kinsman, Corporate Secretary and Director of Sustainability, and Denis Geoffroy, Chief Commercialization Officer (CCO).

  In accordance with an executive employment agreement the Company has in place with Dan Blondal, in case of termination by the Company without cause, he is entitled to six (6) weeks' base pay (or notice) for every year of service to a maximum of twenty-four (24) months. He would not be entitled to further

bonus payments after termination. In the case of resignation after a Change of Control and for 'Good Reason', Dan Blondal is entitled to twenty-four (24) months' base salary.

- Includes the services of Bedrock Capital Corp. ("Bedrock Capital") a company controlled by Paul Matysek the Chairman and a Company Director.
- Includes the services of Donaldson Brohman Martin, CPA Inc. ("DBM CPA"), a firm in which Dan Martino, CFO is a principal.
- Includes fees paid to the Company's directors for their positions as non-executive directors and/or board committee members or chairpersons.

(c) Share-based payments:

- Includes amounts recognized on vesting of stock options and Equity Incentives granted to directors and officers, or accruals for future vesting periods.
- During the year ended December 31, 2022, the Company granted 189,423 RSUs to various directors and officers.
- During the year ended December 31, 2021, 1,580,000 stock options were granted to directors and officers which are exercisable at either 3.62 or $5.10 each. 400,000 of these stock options have a five year term expiring in February 2026, with the remainder having a term of three years expiring in either February 2024 or October 2024. The stock options have varying vesting terms.

LIQUIDITY AND CAPITAL RESOURCES

As at December 31, 2022, the Company had working capital of approximately $40,600,000.

The Company considers its capital structure to consist of its components of shareholders' equity. When managing capital, the Company's objective is to ensure that it continues as a going concern, to ensure it has sufficient capital to deploy on new and existing projects (including the requirement for matching funds relating to SDTC programs), as well as generating returns on excess funds while maintaining liquidity/accessibility to such funds. In order to facilitate the management of its capital requirements, the Company prepares annual expenditure budgets that are updated as necessary depending on various factors, including successful capital deployment, growth of its workforce, and general capital market or industry conditions. The Board of Directors relies on the expertise of the Company's management to sustain future development of the business. Management reviews and adjusts its capital structure on an ongoing basis.

The Company is not subject to any externally imposed capital requirements. There were no changes to the Company's approach to capital management during the year ended December 31, 2022. There are no restrictions on the flow of funds from one part of the Company's business to another.

The Company currently has no source of revenues, though it receives funding from government programs, and certain cost recoveries from strategic partners. Additionally, the Company has historically relied upon equity financing to fund its activities. In order to fund ongoing research activities, expansion, capital expenditures, and operating expenses, the Company will spend its existing working capital and may seek additional capital sources to facilitate growth and expansion plans towards commercialization.

The Company currently invests excess capital in high-interest savings accounts ("HISAs") and/or HISA funds which bear interest at variable rates (cash equivalents), as well as in guaranteed investment certificates ("GICs") bearing fixed rates of interest that are redeemable (cash equivalents) and have terms not exceeding 12 months. As at December 31, 2022 and December 31, 2021, the Company had excess capital invested in a HISA, a HISA fund, and a GIC.

During the year ended December 31, 2022, the Company earned interest income of approximately $924,000 from its GIC, HISA, HISA fund, and the funds held in an interest-bearing escrow account in respect of the JMBM Canada acquisition. The Company's treasury is diversified amongst several Canadian chartered banks and large financial institutions. Safety and security of treasury is a paramount priority to the Company.

The Company's primary source of capital and liquidity from 2020 onwards has been from three financings over the course of fourteen months from February 2020 to April 2021, which generated gross proceeds of approximately $54,000,000 (net, $50,400,000), proceeds received from exercises of stock options and warrants (approximately $5,384,000 during 2021 and 2022, plus subsequent exercises as described below), government assistance programs, and a strategic investment in the Company by Rio Tinto in June 2022 of approximately $12,500,000.

The three financings completed from 2020 onwards are summarized as follows:

- In February 2020, gross proceeds of approximately $11,000,000 was raised through a non-brokered private placement;
- In October 2020, gross proceeds of approximately $14,000,000 was raised through a short form Prospectus financing; and
- In April 2021, gross proceeds of approximately $29,000,000 was raised through a short form Prospectus financing.

In order to facilitate the management of its capital requirements, the Company prepares annual expenditure budgets that are updated as necessary depending on various factors, including successful capital deployment, and strategic growth plans.

The Company is not subject to any externally imposed capital requirements and there were no changes to the Company's approach to capital management during the year ended December 31, 2022.

Contractual obligations

The following table summarizes the Company's contractual maturities for its financial liabilities:

As at December 31, 2022	Carrying amount $	Contractual cash flows $	Under 1 year $	1-5 years $	More than 5 years $
Accounts payable and accrued liabilities	1,829,435	1,829,435	1,829,435	-	-
Accounts payable to related parties	23,639	23,639	23,639	-	-
Lease liabilities	773,917	918,317	246,626	593,960	77,731
Total	**2,626,991**	**2,771,391**	**2,099,700**	**593,960**	**77,731**

The Company subsequently acquired two additional facility leases at its Burnaby location. The commencement date of the leases as February 1, 2023, and total lease payments over the 36-month term of the lease are approximately $497,000.

OUTSTANDING SHARE AND EQUITY DATA

The authorized share capital of the Company consists of unlimited common shares without par value. All issued common shares are fully paid. All stock options, warrants, and RSUs/DSUs outstanding are each convertible into one common share of the Company. As at the MD&A Date, the Company's common share data was as follows:

	As at the MD&A Date	
	#	Weighted average exercise price $
Common shares issued and outstanding	103,132,989	n/a
Stock options outstanding	6,468,512	2.88
Warrants outstanding	1,000,000	4.00
RSUs/DSUs outstanding	605,053	n/a
Fully diluted	**111,206,554**	

Subsequent to December 31, 2022, and through to the MD&A Date, upon the exercise of stock options and warrants, 2,530,085 common shares were issued prices between $1.14 and $2.88 each for proceeds of $4,016,839.

On March 10, 2023, the Company issued 86,409 common shares upon the exercise of RSUs.

On March 17, 2023, the Company granted an aggregate of 764,202 equity incentives to officers, directors, employees and consultants, with each vesting in three annual instalments until March 17, 2026, as follows:

- 452,418 stock options exercisable at $3.28 each for a period five years until March 17, 2028;
- 225,808 RSUs; and
- 85,976 DSUs.

ACCOUNTING MATTERS

The preparation of financial statements in conformity with IFRS requires management to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and reported amounts of income and expenses during each reporting period. Estimates and assumptions are continuously evaluated and are based on management's experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. However, actual outcomes can differ from these estimates. The Company's significant accounting policies are detailed in Note 2 to the financial statements for the year ended December 31, 2022.

Key sources of estimation uncertainty

The preparation of financial statements in conformity with IFRS requires management to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities as at the date of the financial statements and reported amounts of income (loss) and expenses during each reporting period. Estimates and assumptions are continuously evaluated and are based on management's experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. However, actual outcomes can differ from these estimates.

Fair value of equity incentives (stock options, restricted share units, deferred share units, performance share units) and compensatory warrants

Determining the fair value of stock options, and compensatory warrants for services or in relation to financings, requires estimates related to the choice of a pricing model, the estimation of stock price volatility, the fair value of the Company's common shares, the expected forfeiture rate, and the expected term of the underlying instruments. Any changes in the estimates or inputs utilized to determine fair value could have a significant impact on the Company's future operating results or on other components of shareholders' equity.

Property, plant and equipment

The estimated useful lives of property, plant and equipment are reviewed by management and adjusted if necessary. To estimate property, plant and equipment's useful life, management may use its past experience, review engineering estimates and industry practices for similar items of property, plant and equipment to assist in its determination of useful life.

The estimated useful life of the Company's pilot plant within property, plant and equipment is subject to specific estimation uncertainty as to the duration of use. The use of the pilot plant has historically been driven by securing government assistance to conduct research activities that utilize the pilot plant. Accordingly, the Company has historically depreciated the pilot plant over the term of the government assistance program. Future determinations of the expected life of the pilot plant may differ from historical experience.

There have been no changes to the depreciation methods used by the Company during the year ended December 31, 2022.

Critical judgments in applying accounting policies

Acquisitions

The determination of whether a set of assets acquired, and liabilities assumed constitute a business may require the Company to make certain judgments, considering all facts and circumstances. A business is presumed to be an integrated set of activities and assets capable of being conducted and managed for the purpose of providing a return in the form of dividends, lower costs or economic benefits. The transaction with Johnson Matthey Battery Materials Ltd. was determined to constitute an asset acquisition.

Research and operational expenses

The determination of whether expenditures on research and development activities meet the criteria for capitalization as internally generated intangible assets is subject to estimation and uncertainty. The Company has determined that until such time that it has a commercial-scale plant in the condition and location necessary to commence commercial production, that it will remain in the research phase (pre-commercial phase) and accordingly expenditures will be expensed within the Company's results of operations.

The Company has determined that its activities continue to be classified as research in nature, as opposed to development. This results in research costs being expensed to profit or loss within the consolidated financial statements.

Accounting standards issued for adoption of future periods

The following new standards, amendments to standards and interpretations have been issued but are not effective during the year ended December 31, 2022:

The following amendments will be in effect for annual reporting periods beginning on or after January 1, 2023:

Disclosure of Accounting Policies (Amendments to IAS 1 and IFRS Practice Statement 2) – the amendments require that an entity discloses its material accounting policies, instead of its significant accounting policies. Further amendments explain how an entity can identify a material accounting policy.

Definition of Accounting Estimates (Amendments to IAS 8) – the amendments replace the definition of a change in accounting estimates with a definition of accounting estimates. Under the new definition, accounting estimates are "monetary amounts in financial statements that are subject to measurement uncertainty". Entities develop accounting estimates if accounting policies require items in financial statements to be measured in a way that involves measurement uncertainty. The amendments clarify that a change in accounting estimate that results from new information or new developments is not the correction of an error.

The Company anticipates that these amendments will not have a material impact on the results of operations and financial position of the Company.

Financial instruments – classification and fair value

Classification of financial instruments

Financial assets:	Classification:
Cash and cash equivalents	FVTPL
Receivables	Amortized cost
Deposits	Amortized cost

Financial liabilities:	Classification:
Accounts payable and accrued liabilities	Amortized cost
Accounts payable to related parties	Amortized cost
Lease liabilities	Amortized cost

The Company's financial instruments can be exposed to certain financial risks including liquidity risk, credit risk, interest rate risk, price risk, and currency risk. Details of these risks and related assessments as well as the fair value measurements of the Company's financial instruments are included in the Company's financial statements for the year ended December 31, 2022, within Note 13.

OFF-BALANCE SHEET ARRANGEMENTS

Nano One does not utilize off-balance sheet arrangements.

PROPOSED TRANSACTIONS

There are no proposed transactions as the MD&A Date.

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL STATEMENTS

Information provided in this MD&A and the financial statements is the responsibility of management. In the preparation of the financial statements, estimates are sometimes necessary to make a determination of the carrying value for certain assets or liabilities. Management believes such estimates have been based on careful judgments and have been properly reflected in the financial statements. Management maintains a system of internal controls to provide reasonable assurances that the Company's assets are safeguarded and to facilitate the preparation of relevant and timely information.

APPROVAL

The Board of Directors of the Company has approved the disclosure contained in this MD&A.