Nano One Materials Corp.

Management's Discussion & Analysis

December 31, 2021

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, 2021, should be read in conjunction with the Company's annual audited financial statements for the year ended December 31, 2021. 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 28, 2022** (the "MD&A Date"), unless otherwise indicated.

Additional information relating to the Company, including the Annual Information Form ("AIF") dated March 28, 2022, is filed with Canadian securities regulatory authorities on SEDAR (the System for Electronic Document Analysis and Retrieval) (www.sedar.com) and on the Company's website at www.nanoone.ca.

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 CONROLS 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 year ended 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 performance of the Company's business and operations; the intention to grow the business, operations and potential activities of the Company; regulatory changes; the competitive conditions of the industry and the Company's competitive position in the industry; the Company's business plans and strategies; the anticipated benefits of the Company's partnerships; the Company's licensing, supply chain and joint venture opportunities; the applicable laws, regulations and any amendments thereof; and any anticipated future gross revenues and profit margins of the Company's operations.

With respect to the forward-looking statements contained in this MD&A, the Company has made assumptions regarding, among other things: the use of the net proceeds of previous financings; operating and capital costs; anticipated partnerships; the Company's ability to access future financing opportunities; and the Company's ability to attract and retain qualified personnel or management. 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 as 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.

DESCRIPTION OF THE BUSINESS

The Company has developed, patented and scaled-up an innovative patented manufacturing technology (the "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 demonstration pilot plant, and is partnering with key automotive OEMs and cathode manufacturers.

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 cathode materials, which may be used in automotive, grid storage and consumer electronic batteries, including standard, advanced, and next generation solid state batteries.

The Company's first addressable market is cathode materials for lithium-ion rechargeable batteries for electric vehicles, energy storage systems, and consumer electronics. There is growing demand in the lithium-ion battery market for more cost effective, higher performance, and environmentally sustainable energy storage solutions. Nano One's technology also has potential applications in other markets that require specialty mixed metal ceramic powders.

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 added process costs. Furthermore, the process uses lithium feedstock in the form of carbonate rather than hydroxide which is more costly, corrosive and harder-to-handle. The process is feedstock flexible which enables 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, 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.

Product Developments

The Company's primary cathode formulations under development include:

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

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

M2CAM® Technology

In February 2021, Nano One announced the launch of its Metal to Cathode Active Material ("M2CAM") technology which reduces cost, reduces waste, and reduces the carbon footprint in the lithium-ion battery supply chain. The Company commenced or continued discussions with large integrated miners to reduce environmental footprints and maximize upstream value in the global battery supply chain. Nano One's other collaborators include automotive OEMs with similar motivations to meet environmental targets by reducing waste, carbon emissions, logistics and costs. Patents are pending for M2CAM and preliminary test results are showing battery capacity up to 5% higher than cathode materials currently made from metal salts.

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 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 feedstock conversion, precursor formation, lithiation and coating steps into one reaction. 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.

BUSINESS OBJECTIVES

In the near term (one to three years), Nano One intends to focus on:

- Developing, advancing and promoting its One-Pot, M2CAM and coated nano-crystal technologies through collaborative partnerships with OEMs, miners and cathode producers. The Company is aiming to disrupt the supply chain and make nickel-based cathode materials direct from metal powders and lithium carbonate. This will eliminate: (i) the conversion of metals to sulfates and lithium to hydroxide, (ii) the associated energy, GHG emissions, cost, and waste and (c) the unnecessary transport of water and sulfate.
- Prototyping and scaling up by expanding its demonstration pilot plant and laboratory facilities to serve technology development, partnership and licensing objectives.
- Developing, building and operating pilot, demonstration and commercial plants in collaboration with its strategic partners, and generating revenue through licensing and joint venture arrangements that are still in various stages of business development.
- Identifying and validating additional joint development partners throughout the supply chain.

CHANGE IN BOARD OF DIRECTORS

During the year ended December 31, 2021, and subsequent thereto, the Company had the following appointments to its Board of Directors:

- Effective September 7, 2021, Mr. Gordon Kukec was appointed as an independent Director; and
- Effective December 16, 2021, Ms. Carla Matheson was appointed as an independent Director.

Effective November 30, 2021, Mr. John Lando retired from the Company's Board of Directors and resigned from his position as President of the Company. During the year ended December 31, 2021, and subsequent thereto, there were no additional changes to officers or directors of the Company.

RECENT CORPORATE DEVELOPMENTS

In addition to information discussed throughout this MD&A, the Company announced the following developments during the year ended December 31, 2021 and through to the date of this MD&A (from newest to oldest):

Funding to Advance M2CAM and Thermal Processing Initiatives

On March 3, 2022, the Company announced that it will be receiving advisory services and funding of up to $404,000 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

On February 15, 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.

Phase One applied the niobium coating technology to NMC811 cathode active material and the next two phases will focus on the niobium coating of even higher nickel NMC. This will include scaling of the One-Pot coating technology to demonstrate commercial viability and validate the supply chain. Together, CBMM and Nano One are developing an integrated and differentiated supply chain for niobium coated single crystal cathode materials.

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

On January 24, 2022, the Company announced the successful completion of an industrial scale engineering study conducted by Hatch Ltd. (Hatch) a leading global engineering firm. This is another important step forward in Nano One's efforts to bring the latest innovations in cathode manufacturing technology through scale-up towards commercialization. The study supports that Nano One's patented One-Pot M2CAM process offers both environmental and potential economic benefits when compared to conventional cathode manufacturing processes.

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 approximately 1.8 times 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 by approximately 60% prior to recycling. Further, the Hatch work supports that the Nano One's process significantly reduces the number of process steps to get to a single crystal 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, despite One-Pot having over 20-years less industrial optimization. Work is already underway on further optimizations.

Expansion of Team and Advisors

Throughout November and December 2021, the Company announced the engagement of Mr. Dennis Geoffroy as a consultant, the hiring of Adam Johnson (VP, External Affairs), the engagement of Dr. Yuan Gao (Strategic Advisor), and the engagement of Frank Fannon (Fannon Global Advisors, as a Strategic Advisor). Expansion of the Company's team of advisors is in effort to strengthen and enhance Nano One's innovation, commercialization, North American scale-up programs, and strategic communications/external affairs with governments.

Transition in LFP Strategy and Accelerate ZEV Alliance Membership

On November 9, 2021, the Company announced a transition in LFP strategy towards creating a secure and cost competitive supply chain that is domestically integrated with a low environmental footprint. This involves a shift in its LFP

strategic direction to large emerging markets outside of China, starting in North America, and has ceased joint development activities with Pulead Technology Industry.

The goal towards building a fully integrated and resilient battery supply chain in North America must include responsible mining of battery metals, onshore refining, environmentally favourable cathode material production, and recycling. LFP production is free from the constraints of nickel and cobalt, and although its origins are deeply rooted in Canada, its growth over the last decade is almost entirely based in China. Recent LFP cell-to-pack innovations have driven costs down and enabled greater EV range, setting the stage for EV pioneers to shift to LFP. There has never been a greater imperative for a sustainable, responsible, and secure supply of LFP materials and batteries, to be established and supported in North America and Europe, proximal to where the EV's are manufactured.

Canada has clean energy assets, responsibly sourced critical minerals and a rich history in LFP technology and manufacturing. By leveraging these opportunities with Nano One's simplified low-cost approach to cathode production, Nano seeks to create a resilient value-added domestic LFP supply chain in a collaborative ecosystem with a smaller environmental footprint.

Additionally, Nano One announced it has become a member of Accelerate, Canada's zero-emission vehicle (ZEV) supply chain alliance. Launched in 2021, Accelerate is working with its members across the supply chain to create an industrial road map to ensure the growth and stability of Canada's zero- emission vehicle market.

Joint Development Agreement signed with Euro Manganese

On October 4, 2021, the Company announced the signing of a Joint Development Agreement with Euro Manganese Inc. (“Euro Manganese”), a battery raw materials company developing a significant manganese deposit in the Czech Republic.

The two companies will collaborate on developing economically viable and environmentally sustainable applications of high-purity manganese expected to be produced by Euro Manganese from its proposed Chvaletice Manganese Project. The manganese will be evaluated by Nano One in the formation of its innovative cathode materials including LNMO (lithium nickel manganese oxide) and nickel-rich NMC (lithium nickel manganese cobalt oxide). LNMO and NMC materials will be prepared using Nano One’s patented One-Pot process, coated nanocrystal powders and M2CAM technology, enabling the use of sulfate-free metals and lithium carbonate as lower cost and environmentally more sustainable feedstocks.

Completion of 2019 Cathode Development Project with Global Automotive Company and New Agreement

On September 30, 2021, the Company announced the completion of a project with a global automotive OEM (Original Equipment Manufacturer), that was first announced on June 20, 2019 and the two parties have signed a Memorandum of Understanding (“MOU”) to evaluate manganese-rich cathode materials for potential use in automotive scale battery cells.

The completed project successfully demonstrated the synthesis, performance, and improved durability of a proprietary and experimental nickel-rich cathode formulation, using Nano One’s patented One-Pot process. The MOU is for the multi-phase development and evaluation of LNMO batteries using cathode materials prepared by Nano One. Work under the MOU will include performance testing, economic feasibility and future potential commercial collaboration for jointly developed battery cells using Nano One’s advanced LNMO cathode materials.

LNMO has great potential in next-generation lithium-ion batteries for electric vehicles, renewable energy storage and consumer electronic devices. It delivers energy and power on par with other high-performance cathodes and is cost effective because it is cobalt free, low in nickel and does not require excess lithium. LNMO also has an operating voltage that is 25% higher than commercial high nickel cathodes, enabling fewer cells in applications such as power tools and electric vehicles while providing improved productivity, efficiency, thermal management, and power.

Completion of SDTC and BC-ICE Milestone 2 and Receipt of Milestone 3 Funds

On September 9, 2021, the Company announced the achievement of Milestone 2 of the “Scaling Advanced Battery Materials” project jointly funded by SDTC and the British Columbia Innovative Clean Energy, Mines and Petroleum Resources (“BC-ICE”) fund. Consequently, the advance funding for project Milestone 3, in the amount of $1,652,859 in aggregate has been received.

Within Milestone 2, Nano One strengthened its process for both LFP and NMC cathode materials. Nano One’s capabilities and capacity have also significantly increased in this milestone through the addition of staff and equipment and additional laboratory space, pilot, and office facilities. Nano One is now focused on Milestone 3 which involves economic modelling and scaled up demonstration of both LFP and NMC.

Industrial Scale Engineering Study Added to Automotive Project

On August 17, 2021, the Company announced that its cathode evaluation program with a global automotive company has expanded in respect of the evaluation of NMC/LNMO cathode materials. The increased scope will include an engineering report that models cathode manufacturing at an automotive scale based on Nano One's patented One-Pot process, coated nanocrystal, and M2CAM technologies.

Nano One has engaged global engineering firm, Hatch Ltd., to lead an engineering study and provide a report to the automotive company. The report will be based on the engineering study being prepared for Nano One, and will include a Front-End Loading level 1 (FEL1) analysis on capital costs, operating costs, and a cost comparison of the Nano One process versus the conventional cathode material manufacturing process. The report will enable the companies to evaluate both the economic and environmental advantages of Nano One's patented One-Pot, M2CAM and coated nanocrystal process technologies at large industrial scale.

Graduation to the Toronto Stock Exchange

Effective June 8, 2021, Nano One commenced trading on the Toronto Stock Exchange (the "TSX") under the symbol "NANO". Nano One formerly traded on the Toronto Venture Exchange (the "TSX-V") under the symbol "NNO".

Joint Development Agreement with Johnson Matthey

In June 2021, the Company announced the execution of a joint development agreement with Johnson Matthey ("JM") a global leader in sustainable technologies. Under this agreement the companies are to co-develop next generation products and processes for Johnson Matthey's eLNO® family of nickel-rich advanced cathode materials using Nano One's patented One-Pot process and coated nanocrystal technology, for the low-cost, low-carbon footprint production of high-performance lithium-ion battery cathode materials.

On November 11, 2021, JM issued a news release about their plans to exit the battery materials business, which to Nano One, was unexpected.

Co-Development Agreement with CBMM

In May 2021, the Company announced the execution of an advanced lithium-ion battery cathode materials coating development agreement with CBMM, the global leader in the production and commercialization of niobium products and technologies. The objective of the agreement is to optimize Nano One's patented One-Pot process for nickel-rich cathode materials using small amounts of niobium from CBMM as a coating. Niobium is a key element in the advancement of lithium-ion battery cathode materials as it can be made to form a coating on the outer surface of each grain of a cathode powder. As a coating, niobium protects the highly reactive cathode from deleterious side reactions that can cause rapid degradation in high performance batteries while preventing the growth of interfacial resistance during battery cycling.

As announced above on February 15, 2022, the Company and CBMM had successfully completed Phase One of the co-development agreement.

Progress Update on Joint Development Agreement with Asian Manufacturer

In April 2021, the Company announced a progress update on the Joint Development Agreement signed in August 2020 (the "JDA"). The first two phases of the program have been focused on LNMO cathode materials and have been successfully completed with validation by both parties. At the time of the announcement, work was shifting to scale-up considerations, detailed economic analysis, third-party evaluation, and preliminary planning for commercialization. The work under this agreement is on schedule and on budget.

The JDA provides a framework to develop a business plan for the commercialization of cathode materials, through a joint venture, licensing of Nano One's technology and/or through further development work.

The companies are co-developing high-performance LNMO cathode materials using Nano One's patented One-Pot Process. LNMO is of increasing global interest and has great potential in next-generation lithium-ion batteries for electric vehicles, renewable energy storage and consumer electronic devices.

Intellectual Property

In June 2021, the Company announced three (3) new patents issued and allowed in Canada, the US and China. These patents extend the patent estate to provide protection for lithium-ion cathode powders formed by the proprietary One-Pot Process developed by Nano One. Additionally, during February 2022, the Company obtained another issued patent.

As at the MD&A Date, the Company has been issued twenty-one (21) patents which were issued by various jurisdictions including Canada, China, Japan, Korea, Taiwan, and the United States. The patents have expiries ranging between thirteen (13) to nineteen (19) years from the patent issuance date. The Company also has over forty (40) pending patent applications throughout the world.

The Company's 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. 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 program is that with SDTC, as follows:

Sustainable Development Technology Canada ("SDTC"):

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. The SDTC Program #2 grant is for up to $8,545,500 ($5,944,376 received as at December 31, 2021) which includes BC-ICE contributions (discussed below). SDTC Program #2 is estimated to conclude in June 2024.

As of the date of this MD&A, the Company is currently working within Milestone 3 for which it received funding during September 2021 of approximately $1,653,000.

The Company receives funding from the Government of Canada for its research activities through various programs. During the years ended December 31, 2021 and December 31, 2020 the following amounts were received or accrued:

	December 31, 2021	December 31, 2020
Grant cash proceeds received:	**$**	$
Sustainable Development Technology Canada (SDTC)	1,915,359	3,055,202
Innovation Assistance Program (IAP)	-	241,225
Automotive Supplier's Innovation Program (ASIP)	-	217,446
Industrial Research Assistance Program (NRC-IRAP)	33,372	182,285
Other Grants	-	2,700
	1,948,731	3,698,858
Grant cash proceeds accrued:		
Industrial Research Assistance Program (NRC-IRAP)	**47,652**	-

The cumulative amount of program funding received since January 1, 2014 from the Government of Canada are as follows:

	December 31, 2021	December 31, 2020
	$	$
Sustainable Development Technology Canada (SDTC)	8,025,672	6,110,313
Automotive Supplier's Innovation Program (ASIP)	1,950,952	1,950,952
Industrial Research Assistance Program (NRC-IRAP)	828,338	794,966
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
	11,224,907	9,276,176

OVERALL PERFORMANCE

Further to the "Recent Corporate Developments" as discussed above, the Company generated a net increase in cash and cash equivalents during the year ended December 31, 2021, of approximately $24,902,000 inclusive of the Short Form Prospectus financing of common shares completed on April 1, 2021 for gross proceeds of approximately $28,917,000 (approximately $26,900,000 net proceeds after cash commissions and expenses).

Other key contributors to the increase in cash and cash equivalents were:

- Exercises of stock options and warrants for total proceeds of approximately $4,882,000;
- Proceeds from Government assistance programs mainly comprising approximately $1,915,000 from SDTC and BC-ICE; and
- The maturity of a short-term investment of approximately $1,009,000.

See "Cash flows for the year ended December 31, 2021" below within Discussion of Operations for further details on cash flows for the year.

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, 2021 $	December 31, 2020 $	December 31, 2019 $
Revenues	**-**	-	-
Loss and comprehensive loss	**(11,323,108)**	(5,212,408)	(3,781,180)
Loss per share - basic and diluted	**(0.12)**	(0.07)	(0.06)
Cash and cash equivalents	**52,652,258**	27,750,290	1,747,514
Total assets	**55,357,897**	30,959,027	2,932,912
Total liabilities	**1,602,926**	2,060,691	1,064,476
Shareholders' equity	**53,754,971**	28,898,336	1,868,436

FOURTH QUARTER

For the three months ended December 31, 2021 and December 31, 2020

The following table summarizes the Company's results of operations and cash flows for the three months ended December 31, 2021 and December 31, 2020 (rounded):

	Three months ended		
	December 31, 2021 $	December 31, 2020 $	**Change $**
Revenue	**-**	-	**-**
Loss from operating expenses	**(2,513,000)**	(2,142,000)	**(371,000)**
Loss and comprehensive loss	**(2,462,000)**	(2,104,000)	**(358,000)**
Cash used in operating activities	**(2,044,000)**	(2,945,000)	**901,000**
Cash (used in) provided by investing activities	**(70,000)**	154,000	**(224,000)**
Cash provided by financing activities	**137,000**	16,618,000	**(16,481,000)**

Cash used in investing activities during the three months ended December 31, 2021, is attributable to the excess of cash outflows on equipment deposits and purchases, net of government assistance proceeds towards purchases of equipment over interest income earned on high-interest savings accounts.

Cash provided by financing activities during the three months ended December 31, 2021, is attributable to the exercise of options and warrants of approximately $189,000 during the period then ended, offset by facility lease payments of approximately $52,000. The cash provided by financing activities in the comparative period reflected the net proceeds from the Short Form Prospectus offering completed in October 2020 of approximately $13,000,000, and greater volumes and amounts of exercises of options and warrants.

Certain components of operating expenses for the three months ended December 31, 2021 and December 31, 2020, were as follows (rounded):

	Three months ended		
	December 31, 2021	December 31, 2020	**Increase (decrease)**
	$	$	**$**
Consulting fees	**91,000**	116,000	**(25,000)**
Investor relations and shareholder information	**234,000**	170,000	**64,000**
Professional fees, net	**123,000**	40,000	**83,000**
Salaries and benefits, net	**349,000**	290,000	**59,000**

- Consulting fees:

  Consulting fees were primarily comprised of corporate advisory/advisory committee and increased consultancy services relating to cathode commercialization efforts including efforts towards emerging automotive scale opportunities in the LFP space. Additionally, human resources contractor costs decreased, while IT consulting increased given the Company's expanded workforce and increased IT infrastructure.

- Investor relations and shareholder information:

  Investor relations and shareholder information costs increased as a result of public relations fees primarily concentrated during Q4 2021 (three months ended December 31, 2021) as well as a general increase in marketing communication efforts throughout the year.

- Professional fees

  Professional fees were characterized by legal services relating to patent filings and maintenance, as well as an accrual for the year end audit fee, and legal services for general corporate matters. The increase from the comparative period is attributable to increased volume of services in all aspects and the annual audit fee accrual which is recorded in the fourth quarter of each year.

- Salaries and benefits:

  Staffing levels continue to increase in both the Company's corporate and research departments. Salaries and benefits are presented net of allocations of SDTC government grants.

  During the three months ended December 31, 2021, the Company welcomed 5 employees to its company-wide team.

DISCUSSION OF OPERATIONS

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.

Research expenses

Research expenses, net for the three months and year ended December 31, 2021 and December 31, 2020, were as follows (rounded):

	Three months ended			Year ended		
	December 31, 2021 $	December 31, 2020 $	**Change $**	**December 31, 2021 $**	December 31, 2020 $	**Change $**
Contractors	**304,000**	35,000	**269,000**	**526,000**	170,000	**356,000**
Labour	**797,000**	603,000	**194,000**	**2,599,000**	1,733,000	**866,000**
Safety and training	**17,000**	26,000	**(9,000)**	**93,000**	62,000	**31,000**
Supplies	**230,000**	108,000	**122,000**	**709,000**	315,000	**394,000**
Utilities	**26,000**	12,000	**14,000**	**67,000**	32,000	**35,000**
	1,374,000	784,000	**590,000**	**3,994,000**	2,312,000	**1,682,000**
Depreciation	**159,000**	17,000	**142,000**	**550,000**	189,000	**361,000**
Cost recoveries	**(308,000)**	(18,000)	**(290,000)**	**(614,000)**	(242,000)	**(372,000)**
Government assistance (1)	**(385,000)**	360,000	**(745,000)**	**(1,797,000)**	(2,030,000)	**233,000**
Research expenses, net	**840,000**	1,143,000	**(303,000)**	**2,133,000**	229,000	**1,904,000**

(1) Government assistance for the three months ended December 31, 2020 was in a net expense position due to accounting adjustments recognized during the three months then ended.

In addition to the research expenses, net amount presented above, the Company incurred approximately $90,000 and $217,000 respectively, during the three months and year ended December 31, 2021, within professional fees, and before allocations of SDTC proceeds, for charges relating to patent filings and applications. Additionally, the Company incurred approximately $734,000 net of government grant allocations on research and development equipment, pilot plant, and leasehold improvements in aggregate during the year ended December 31, 2021.

Supplies costs primarily comprises chemical formulations which may be subject to fluctuations in commodity prices. Overall, the Company's exposure to fluctuations in commodity prices has not had a significant impact on operations given the relative value of volumes purchased, but is expected to have an increasing impact on operations as volumes and costs increase in 2023 and beyond.

Contractors costs include costs for engineering studies such as the work performed by Hatch as discussed above, third-party researchers, and amounts paid to environmental agencies that assist with chemical supply removal. The Company is compliant to the best of its knowledge with all local required environmental waste and disposal regulations.

The Company's facilities and staffing expansion is a direct result of the increasing global interest in clean technology, battery materials and production, the Company's technologies and processes, progress through government programs, technological breakthroughs, and new strategic partnerships. Market dynamics coupled with the increased capital resources contribute to an overall increase in research activities and related expenditures in all or most categories, which works to expedite the achievement of the Company's strategic goals.

Results from operations for the years ended December 31, 2021 and December 31, 2020

The following table summarizes the Company's results of operations and cash flows for the years ended December 31, 2021 and December 31, 2020 (rounded):

	Year ended		
	December 31, 2021 $	December 31, 2020 $	**Change $**
Revenue	**-**	-	**-**
Loss from operating expenses	**(11,391,000)**	(5,301,000)	**(6,090,000)**
Loss and comprehensive loss	**(11,323,000)**	(5,212,000)	**(6,111,000)**
Cash used in operating activities	**(7,019,000)**	(2,923,000)	**(4,096,000)**
Cash provided by (used in) investing activities	**317,000**	(1,512,000)	**1,829,000**
Cash provided by financing activities	**31,604,000**	30,438,000	**1,166,000**

Certain components of operating expenses for the years ended December 31, 2021 and December 31, 2020, were as follows (rounded):

	December 31, 2021 $	December 31, 2020 $	**Increase (decrease) $**
Consulting fees	**511,000**	456,000	**55,000**
Investor relations and shareholder information	**761,000**	566,000	**195,000**
Professional fees, net	**335,000**	219,000	**116,000**
Salaries and benefits, net	**1,823,000**	1,005,000	**818,000**

- Consulting fees:

  Consulting fees were substantially comprised of corporate advisory/advisory committee and consultancy services relating to cathode commercialization efforts including efforts towards emerging automotive scale opportunities in the LFP space. Despite increased consulting in this specific area, there was a decrease in costs within this component of consulting fees. Additionally, human resources fees and expenses increased, while IT consulting also increased given the Company's expanded workforce and IT infrastructure.

- Investor relations and shareholder information:

  The main component and driver of the increase in investor relations fees is the addition of public relations services and an increase in marketing communication efforts. Due to a decrease in conference and road show costs with no travel, additional marketing activities were engaged to increase market awareness.

- Professional fees

  Professional fees increased due to an increase in general corporate legal fees, and audit fees. The increase is also attributable to a lower allocation of SDTC proceeds towards the gross amounts incurred on professional fees.

- Salaries and benefits:

  Staffing levels continue to increase in both the Company's corporate and research departments. Salaries and benefits are presented net of allocations of SDTC government grants.

  During the year ended December 31, 2021, the Company welcomed 30 employees/contractors/interns to its company-wide team. As of the date of this MD&A, the Company has 66 employees and/or contractors.

Global Pandemic (COVID-19)

In March 2020, the World Health Organization declared the outbreak of COVID-19 a global pandemic. This contagious disease outbreak, which has continued to spread, and any related adverse public health developments, has adversely affected workforces, economies, and financial markets globally, potentially leading to an economic downturn. It is not possible for the Company to predict the duration or magnitude of the adverse results of the outbreak and its effects on the Company's business or results of operations or on the Company's industry partners who provide in-kind and/or financial contributions to the Company's government programs. There are travel restrictions and health and safety concerns that may delay the Company's research activities. Operations depend on safeguarding all personnel during the outbreak, which may be prohibitive in certain aspects. Nonetheless, the Company has implemented prevention measures at its office and laboratory facilities including the facilitation of remote work programs. Overall, travel and other restrictions related to the COVID-19 pandemic have not had a significant impact on the Company's operations and research efforts including staffing levels. The shipment of purchased equipment at times has been partially delayed due to the pandemic, and travel by employees and executives has been limited, however, the Company continues to progress partnerships and research efforts without significant constraint.

Various Government wage and loan subsidies are available to qualified companies to assist them with operating costs during the pandemic, and the various programs are constantly being expanded and relaxed, which may qualify the Company for additional assistance. As at the MD&A Date, the Company had qualified for and received an additional $512,500 from SDTC ($262,500 of which was received during the year ended December 31, 2021), and approximately $241,000 from the Innovative Assistance Program (NRC-IRAP) (during the year ended December 31, 2020), both in relation to COVID-19 pandemic relief.

Cash flows for the year ended December 31, 2021

Cash used in operating activities was approximately $7,019,000, largely driven by $6,385,000 incurred on cash-based operating expenses plus approximately $634,000 in changes in working capital items. This equates to an average monthly operating burn rate of approximately $600,000 for the year ended December 31, 2021.

Cash provided by investing activities was approximately $317,000, driven by the maturity of a short-term investment (a fixed rate non-redeemable guaranteed investment certificate) including interest income received on the short-term investment and high-interest savings accounts of approximately $1,208,000 in aggregate, partially offset by approximately $891,000 in equipment and other deposits, purchases of property and equipment (primarily research equipment and leasehold improvements, net of government assistance amounts received) and payments for issuance costs of newly issued patents (intangible assets).

Cash provided by financing activities was approximately $31,604,000 substantially comprising the net proceeds from the Short Form Prospectus financing of common shares that closed in April 2021, and the exercise of stock options and warrants generating net proceeds of approximately $31,794,000 after cash commissions, legal and filing fees. Cash flows from financing activities are partially reduced by the basic rent portion of lease payments of the Company's facilities of approximately $190,000 in aggregate.

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, 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)
December 31, 2020	-	(2,103,524)	(0.02)
September 30, 2020	-	(1,504,365)	(0.02)
June 30, 2020	-	(541,673)	(0.01)
March 31, 2020	-	(1,062,846)	(0.01)

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 be insignificant to the Company's financial position and results of operations.

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

- The quarter ended December 31, 2021, saw an increase in professional fees and consulting fees for the reasons addressed above in "Discussion of Operations" and "Fourth Quarter". Additionally, there were additional fees incurred on engineering studies, and a reduction in amounts recognized as government assistance which are offsets to reduce research expenses, net.
- The quarters ended June 30, 2021 and September 30, 2021, were reflective of a general increase in activities in all departments and projects for the Company including increased investor relations programs, increased research expenditures, and increased salaries and benefits reflective of an expanded workforce.
- The quarter ended March 31, 2021, included greater than normal share-based payment expense (non-cash) of approximately $3,070,000 in relation to the grant of stock options of which certain stock options granted to directors and officers vested immediately.
- The quarter ended June 30, 2020, included significant Government assistance recoveries in relation to COVID-19 pandemic relief which were included directly in profit or loss as opposed to deferred (liability).

Use of Proceeds from Financings

The Company completed the following 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, 2021, 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.

Principal Purposes	**Use of Proceeds $**
Research activities	6,124,201
Capital equipment purchases and leasehold improvements on laboratory facilities	2,879,474
Pilot plant expansion	510,584
Intellectual property acquisition	420,998
Business development and strategic alternatives	659,169
Working capital	7,672,741
Proceeds used	**18,267,167**
Remaining	32,144,590
Net proceeds of the financings	**50,411,757**

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, 2021 $	Transactions year ended December 31, 2020 $	**Balances outstanding December 31, 2021 $**	Balances outstanding December 31, 2020 $
Bedrock Capital	150,000	258,500	-	-
DBM CPA	117,925	91,500	8,400	7,875
Directors' fees	86,250	79,000	-	-
Management and directors' fees	354,175	429,000	8,400	7,875
Officers - Salaries and benefits / research expenses	1,172,800	830,000	631	2,696
Directors and officers - Share-based payments	3,756,185	1,339,100	-	-
Professional fees	188,584	191,635	15,993	38,753
	5,471,744	2,789,735	**25,024**	49,324

(a) Management and directors' fees:

- Includes the services of Bedrock Capital Corp. ("Bedrock Capital") a company controlled by Paul Matysek the Chairman and a Director of the Company;
- Includes the services of Donaldson Brohman Martin, CPA Inc. ("DBM CPA"), a firm in which Dan Martino, CFO is a principal; and
- Includes fees paid to the Company's directors for their positions as non-executive directors and/or board committee members or chairpersons (Lyle Brown, $33,375 (2020 - $39,500), Joseph Guy, $28,375 (2020 - $39,500), Gord Kukec, $22,625 (2020 - $nil), Paul Matysek, $1,875 (2020 - $nil)).

(b) Professional fees:

- Includes the services of Patent Filing Specialists Inc. ("Patent Filing Specialists"), a company controlled by Joseph Guy, a Company Director. Transactions incurred during the year ended December 31, 2021 are included within both intangible assets and professional fees (2020 – professional fees only).

(c) Salaries and benefits (including allocations to research expenses (recoveries):

- Includes salaries and short-term variable cash-based compensation incentives paid to Dan Blondal, CEO ($397,900 (2020 - $362,500)), Stephen Campbell, CTO ($252,000 (2020 - $180,000), John Lando, Former President until November 30, 2021 ($283,150 (2020 - $287,500)), Alex Holmes, COO ($204,750 (2020 - $nil)), and Pamela Kinsman, Corporate Secretary and Director of Sustainability and Corporate Affairs ($35,000 (2020 - $nil)). Expense reimbursements outstanding as at December 31, 2021 related to Alex Holmes (2020 - related to Dan Blondal).

  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.

(d) Share-based payments:

- Includes amounts recognized on vesting of stock options and Equity Incentives granted to 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 three year terms expiring in either February 2024 or October 2024. The stock options have varying vesting terms. During the year ended December 31, 2020, 1,140,000 stock options were granted to directors and officers exercisable at $2.52 each until July 20, 2023 which vested immediately on grant.
- In October 2021, the Company granted 184,505 RSUs and 8,626 DSUs to various directors and officers (2020 – none were granted).

LIQUIDITY AND CAPITAL RESOURCES

As at December 31, 2021, the Company had working capital of approximately $52,000,000.

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 the SDTC program), as well as generating returns on excess funds while maintaining accessibility to such funds. In order to facilitate the management of its capital requirements, the Company prepares expenditure budgets that are updated as necessary depending on various factors, including successful capital deployment and general 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, 2021.

The Company currently has no source of revenues, though it receives funding from government programs, and certain research 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 and pay for operating expenses, the Company will spend its existing working capital and may complete additional equity financings to facilitate the management of its capital requirements.

Additionally, the Company may seek to invest excess capital in guaranteed investment certificates ("GICs") bearing fixed rates of interest that are either redeemable (cash equivalents) or non-redeemable (short-term investments) and have terms not exceeding 24 months. The Company will also hold excess capital in high-interest savings accounts ("HISAs") which bear interest at variable rates (classified as cash equivalents).

As at December 31, 2021, the Company had excess capital invested in HISAs which are accessible on demand and did not have any GIC or other short-term investment holdings. The primary source of interest income earned during the year then ended was from HISAs.

The Company's primary sources of capital and liquidity during the years ended December 31, 2021 and December 31, 2020, were primarily generated 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, $50,412,000) as well as proceeds received from government assistance programs which amounted to $1,948,000 and $3,699,000 during those respective years. The financings over the previous two fiscal years are summarized as follows:

- In February 2020, the Company completed a non-brokered private placement for gross proceeds of approximately $11,000,000;
- In October 2020, the Company completed a Short Form Prospectus financing for gross proceeds of approximately $14,000,000; and
- In April 2021, the Company completed a Short Form Prospectus financing for gross proceeds of approximately $28,900,000.

In order to facilitate the management of its capital requirements, the Company prepares expenditure budgets that are updated as necessary depending on various factors, including successful capital deployment and general industry conditions. The Board of Directors relies on the expertise of the Company's management to sustain future development of the business.

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, 2021. The Company does not have specific capital or operating expenditure commitments on any of its projects aside from the provisions of SDTC Program #2 that require the Company to have matching funds to the grant amounts and to incur the required expenditures to complete the various Milestones. The Company will use its existing working capital to incur the required SDTC Program #2 expenditures.

Contractual obligations

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

As at December 31, 2021	Carrying amount $	Contractual cash flows $	Under 1 year $	1-3 years $	3-5 years $	More than 5 years $
Accounts payable and accrued liabilities	759,014	759,014	759,014	-	-	-
Accounts payable to related parties	25,024	25,024	25,024	-	-	-
Lease liabilities	799,930	990,588	207,724	355,342	233,194	194,328
Total	**1,583,968**	**1,774,626**	**991,762**	**355,342**	**233,194**	**194,328**

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. 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	95,579,373	n/a
Stock options outstanding	6,487,357	2.77
Warrants outstanding	4,342,917	2.60
RSUs/DSUs outstanding	382,554	n/a
Fully diluted	**106,792,201**	

During the year ended December 31, 2021, the Company granted 184,505 RSUs and 8,626 DSUs to officers and directors of the Company, whereby one-third (64,377) of the RSUs and DSUs vest on August 27, 2022, one-third (64,377) vest on August 27, 2023, and the remaining one-third (64,377) vest on August 27, 2024.

The value of the Equity Incentives granted was based on the fair value of the of the Company's common shares on the date of grant. Accordingly, the Equity Incentives were granted at a fair value of $4.17 each for a total value of $805,356 which is being recognized within share-based payment expense as the Equity Incentives vest.

SUBSEQUENT EVENTS

The Company has received proceeds of $59,532 upon the exercise of stock options and warrants as described below:

- The Company issued 25,000 common shares upon the exercise of stock options at $0.70 each for proceeds of $17,500; and
- The Company issued 26,270 common shares upon the exercise of warrants at $1.60 each for proceeds of $42,032.

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, 2021.

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 stock options and compensatory warrants

Determining the fair value of compensatory warrants (finders' warrants) and stock options 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.

The fair value of stock options granted, or compensatory warrants issued by the Company is determined by using the Black-Scholes option pricing model. The fair value is particularly impacted by the Company's stock price volatility which is determined by way of a historical look-back of weekly closing stock prices over a period of time equivalent to the term provided on stock options and compensatory warrants when granted or issued.

Property and equipment

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

The estimated useful life of the Company's pilot plant within property 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, 2021. The Company's pilot plant is being depreciated over the term of the existing SDTC Program #2 which is expected to conclude in June 2024.

Critical judgments in applying accounting policies

Income taxes

Tax provisions are based on enacted or substantively enacted laws. Changes in those laws could affect amounts recognized in profit or loss both in the period of change, which would include any impact on cumulative provisions, and in future periods. Deferred tax assets (if any) are recognized only to the extent it is considered probable that those assets will be recoverable. This involves an assessment of when those deferred tax assets are likely to reverse and a judgment as to whether or not there will be sufficient taxable profits available to offset the tax assets when they do reverse. This requires assumptions regarding future profitability and is therefore inherently uncertain. To the extent assumptions regarding future profitability change, there can be an increase or decrease in the amounts recognized in respect of deferred tax assets as well as the amounts recognized in profit or loss in the period in which the change occurs.

The Company has determined that the likelihood and timing of future profitability for which to use its unrecognized deferred tax assets is uncertain at this time, therefore, the Company's deferred tax assets continue to be unrecognized.

Research 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 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 financial statements.

Changes in accounting policies and future accounting standards

During the year ended December 31, 2021, there were no changes to the Company's significant accounting policies, nor any new accounting policies adopted.

Certain pronouncements have been issued by the IASB or IFRIC that are effective for accounting periods beginning on or after January 1, 2022. The Company has reviewed these updates and determined that none are applicable or consequential to 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, 2021, within Note 11.

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.