Nano One Materials Corp.

Management's Discussion & Analysis

For the six months ended

June 30, 2023

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 six months ended June 30, 2023, should be read in conjunction with the Company's condensed interim consolidated financial statements for the six months ended June 30, 2023 and the audited annual financial statements for the year ended December 31, 2022, 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 **August 9, 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.

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 six months ended June 30, 2023 and year ended December 31, 2022, 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 "believe", "expect", "plan", "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", "should" or "will" happen, or by discussions of strategy. Forward-looking statements include estimates, plans, expectations, opinions, forecasts, projections, targets, guidance, goals, 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 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, revenues 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, supply chain and products; the commencement of a commercialization phase; current and future collaboration engineering, and optimization research projects; plans for construction; scale-up and operation of a multi cathode piloting hub; 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 strategic partnerships and the anticipated benefits of those partnerships; the Company's licensing, supply chain, joint venture opportunities and potential royalty arrangements; the purpose for expanding the Company's 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.

External Global Factors

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 is a clean technology company with a patented, scalable and low carbon intensity industrial process for the low-cost production of high-performance lithium-ion battery cathode materials, with strategic collaborations and partnerships, including automotive OEMs and strategic industry supply chain companies like BASF, Umicore and Rio Tinto. Nano One's technology is applicable to electric vehicles, energy storage, and consumer electronics, reducing costs and carbon intensity while improving environmental impact. The Company aims to pilot and demonstrate its technology as turn-key production solutions for license, joint venture, and independent production opportunities, leveraging Canadian talent and critical minerals for emerging markets in North America, Europe, and the Indo-Pacific region. Nano One has received funding from SDTC and the Governments of Canada and British Columbia.

See further details within "*Corporate Developments – Year to Date*" under *"Advancement of Commercial Plans for LFP".*

One-Pot Process Technology

Nano One's One-Pot Process is engineered to use non-sulfate forms of metal feedstock, such as metal powders, hydroxides, or carbonates, with the intention of reducing total cost and carbon footprint per kilogram of cathode active material (CAM). The process eliminates the cost, energy and logistics of converting metals to sulfates, it eliminates large volumes of wastewater and sodium sulfate byproduct that is generated during subsequent steps to make PCAM, and it also reduces water consumption, GHG emissions and process costs. This flexibility in feedstock provides sourcing optionality and extends to lithium which can be used in the form of carbonate or hydroxide, for all Nano One CAM formulations, with preference for lithium carbonate as it reduces cost, corrosion, shelf-life and handling issues.

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 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.

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.

Intellectual Property

The Company continues to expand patent coverage of proprietary technology as further detailed in a July 20, 2023 press release. As of the press release, Nano One now has thirty-three (33) patents which have been granted or approved across the globe. The Company also has many 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. Additional information on the Company's intellectual property can be found in the Company's AIF.

CHANGE IN EXECUTIVE OFFICERS AND BOARD OF DIRECTORS

Effective April 3, 2023, Adam Johnson was appointed Senior Vice-President of External Affairs.

RECENT CORPORATE MILESTONES

Joint Development Agreement with Our Next Energy (ONE)

On June 14, 2023, the Company announced signing a Joint Development Agreement (JDA) with ONE to collaborate on the validation, qualification, and production of a North American supply of lithium iron phosphate (LFP) cathode active materials (CAM). The LFP CAM will be produced at Nano One's 200 tonnes per annum ("tpa") pilot facility in Candiac, Québec, for validation in ONE's production LFP cells used in its Aries and Gemini batteries, with the goal of a binding offtake agreement and expansion into future production facilities. The commissioning of Nano One's 200 tpa pilot facility is on schedule for completion in Q3 2023, and is currently the only LFP CAM production plant in North America. Nano One's production milestones are aligned with ONE's battery production growth projections.

Successful Completion of Phase Two of Co-Development Agreement with CBMM

On May 17, 2023, the Company announced the successful completion of phase two of the co-development work with CBMM, the world's leading supplier of Niobium products and technology. Phase two successfully utilized CBMM's Niobium product to make coated nanocrystal high nickel (Ni>90%) NMC cathode active material. Enhanced durability was displayed using Nano One's proprietary One-Pot process and Metal to Cathode Active Material (M2CAM®) technology.

This achievement opens new doors of opportunity for the two companies to market and cross-collaborate with their existing customer bases to create market pull both for Nano One's patented technology and develop a new market for CBMM's sustainable, high-quality product. This also adds a secure and resilient supply chain partner to Nano One's list of qualified automotive supply chain collaborators, and validates strategic planning and business development efforts that will ultimately maximize opportunities for the Company and provide shareholder value.

Phase three will focus on scaling of the One-Pot and M2CAM technology using CBMM's product, and it includes electrochemical evaluation in full pouch cells to demonstrate commercial viability.

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

On February 21, 2023, the Company announced that it 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.

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, 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.

New program funding from SDTC

On February 13, 2023, the Company announced an award of up to $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).

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 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).

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 six months ended June 30, 2023, and through to the MD&A Date (from newest to oldest):

Advancement of Commercial Plans for LFP and Other Cathode Materials

On July 20, 2023, further to an update provided on April 24, 2023, the Company provided an update regarding its commercial plans which are aimed at jumpstarting the commercialization of its One-Pot process starting at 200 tpa (initial pilot facility) in 2023, expanding in steps to 2,000 tpa in 2024, and creation of a 10,000 tpa (full scale commercial plant) thereafter. The initial expansion to 200 tpa relates to the effort of expediting commercial sampling, offtake and first revenues, in respect of retrofitting and recommissioning the Company's Candiac facility in Québec with its new One-Pot reactors and technology.

Nano One will launch LFP in North America, followed by Europe and the Indo-Pacific region, giving it access to hundreds of thousands of tons of demand to power hundreds of gigawatt hours of battery storage and millions of EVs. It begins with a first-of-a-kind commercial-scale LFP production facility, using Nano One's proprietary One-Pot process that leverages its know-how, equipment, land, people, and shareholder support.

Nickel and manganese-based cathode materials play an equally important role in Nano One's growth strategy, and the Company is applying its technologies and collaborating with multiple strategic partners to address the need for greater supply chain security, cost reductions, and environmental protection. To this end, Nano One also has engineering work underway for a separate 100 tpa NMC and LNMO pilot facility. Having piloting capabilities for LFP, NMC and LNMO will enable Nano One to prototype, validate, design, and pilot a new generation of CAM and accelerate the commercial adoption of its One-Pot and sulfate-free M2CAM processes in pursuit of production, joint venture and licensing opportunities.

The Company is pleased to report that its lithium iron phosphate (LFP) trials, One-Pot reactors, sampling and pilot production plans are being expedited as previously outlined, and that initial engineering plans for its first full scale commercial plant are nearing completion. Nano began producing tonne-sized batches successfully in Q2 2023 using existing commercial scale equipment. In parallel Nano is installing smaller modular One-Pot reactors, engineered and built in Québec with the aim of conducting smaller trials, evaluating new reactor designs and fast-tracking plans.

The supply of critical minerals and raw material inputs are being trialed in large scale batches, providing Nano One with greater certainty of feedstock quality and full-scale operating conditions and the new reactors will be automated with feeding and dosing systems to ensure consistent quality and reproducibility of LFP samples. Nano One aims to demonstrate scalability and production for third party qualification with the goal of securing offtake agreements and first revenues with its partners, that could clear a path for rapid commercial scale-up. The trials will also facilitate further learnings on equipment, engineering, quality systems and operational excellence.

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.
- LFP trials with the One-Pot technology started in January 2023.

OVERALL PERFORMANCE

Further to the "*Corporate Developments – Year to Date*" and *"Recent Corporate Developments"* as discussed above, the Company's change in cash flows is summarized below.

The key sources and uses of cash and cash equivalents during the three and six months ended June 30, 2023, were as follows:

	Three months ended June 30, 2023 $	Six months ended June 30, 2023 $
Key sources of cash:		
Government programs	30,000	3,396,000
Interest income	402,000	820,000
Exercises of stock options and warrants	2,931,000	6,777,000
Key uses of cash (other than operating activities):		
Construction/equipment investments, patent issuance fees, and deposits, net	(595,000)	(1,347,000)
Facility lease payments	(102,000)	(191,000)
Operating activities - net of government program allocations to operating expenses		
Cash-based operating expenses, net	(7,275,000)	(15,172,000)
Changes in working capital items, net	(1,028,000)	4,070,000
Net use of cash in operating activities	**(8,303,000)**	**(11,102,000)**
Average net monthly use of cash in operations	**(2,800,000)**	**(1,900,000)**
OVERALL NET CHANGE IN CASH DURING THE PERIOD	**(5,667,000)**	**(5,042,000)**

The proceeds from exercises of stock options and warrants comprises the exercise of expiring warrants in February 2023 which resulted in proceeds of approximately $3,651,000 from the exercise of 2,281,939 warrants at $1.60 each since January 1, 2023, and the exercise of stock options generating proceeds of approximately $3,126,000 primarily inclusive of options exercisable at $2.52 each that were set to expire in July 2023.

Proceeds from Government programs during the three months ended June 30, 2023 were from NRC-IRAP and other grants. The amount received for the six months ended June 30, 2023, was inclusive of the SDTC Milestone 1 grant.

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.

For the three and six months ended June 30, 2023 and June 30, 2022

The following tables summarize the Company's results of operations and cash flows for the three and six months ended June, 2023 and June 30, 2022 (rounded):

	Three months ended		
	June 30, 2023 $	June 30, 2022 $	**Change $**
Revenue	**-**	-	**-**
Loss from operating expenses	**(8,089,000)**	(4,538,000)	**(3,551,000)**
Loss and comprehensive loss	**(7,688,000)**	(4,415,000)	**(3,273,000)**
Cash used in operating activities	**(8,303,000)**	(2,913,000)	**(5,390,000)**
Cash used in investing activities	**(193,000)**	(10,402,000)	**10,209,000**
Cash provided by financing activities	**5,961,000**	12,498,000	**(6,537,000)**

	Six months ended		
	June 30, 2023	June 30, 2022	**Change $**
Revenue	**-**	-	**-**
Loss from operating expenses	**(16,573,000)**	(8,902,000)	**(7,671,000)**
Loss and comprehensive loss	**(15,734,000)**	(8,728,000)	**(7,006,000)**
Cash used in operating activities	**(11,101,000)**	(6,640,000)	**(4,461,000)**
Cash used in investing activities	**(527,000)**	(10,588,000)	**10,061,000**
Cash provided by financing activities	**6,586,000**	12,505,000	**(5,919,000)**

See above for details on key sources and uses of cash and cash equivalents during the three and six months ended June 30, 2023.

Research and operational expenses

Amounts for the three and six months June 30, 2023 and June 30, 2022 were as follows (rounded):

	Three months ended			Six months ended		
	June 30, 2023 $	June 30, 2022 $	**Change $**	**June 30, 2023 $**	June 30, 2022 $	**Change $**
Research and operational expenses (cash-based)	**2,327,700**	1,618,000	**709,700**	**3,932,700**	3,344,000	**588,700**
Contractors - warrants issued	**-**	595,000	**(595,000)**	**-**	595,000	**(595,000)**
Inventory adjustments	**123,000**	-	**123,000**	**321,000**	-	**321,000**
Depreciation	**278,000**	201,000	**77,000**	**561,000**	394,000	**167,000**
Cost recoveries	**(103,700)**	(324,000)	**220,300**	**(161,700)**	(329,000)	**167,300**
Government assistance accrued, received, or amortized	**(571,000)**	(68,000)	**(503,000)**	**(654,000)**	(108,000)	**(546,000)**
Research and operational expenses, net	**2,054,000**	2,022,000	**32,000**	**3,999,000**	3,896,000	**103,000**

In addition to the research and operational expenses, net amount presented above, the Company incurred approximately $170,000 and $312,000 during the three and six months ended June 30, 2023, respectively, within professional and consulting, for charges relating to patent filings and applications.

Certain components of operating expenses for the three and six months ended June 30, 2023 and June 30, 2022, were as follows (rounded):

	Three months ended		
	June 30, 2023 $	June 30, 2022 $	**Increase (decrease) $**
Business development and investor relations	**208,000**	266,000	**(58,000)**
General and administrative expenses	**619,000**	280,000	**339,000**
Professional and consulting, net	**647,000**	461,000	**186,000**
Wages, benefits and fees, net	**4,026,000**	998,000	**3,028,000**

	Six months ended		
	June 30, 2023 $	June 30, 2022 $	**Increase (decrease) $**
Business development and investor relations	**353,000**	403,000	**(50,000)**
General and administrative expenses	**1,287,000**	550,000	**737,000**
Professional and consulting, net	**1,250,000**	970,000	**280,000**
Wages, benefits and fees, net	**8,844,000**	2,007,000	**6,837,000**

A notable contribution to the increased operating expenses for the six months ended June 30, 2023 is the inclusion of operating expenses the Company's Candiac operations for the entire six months ended June 30, 2023, whereas Candiac operations were not consolidated during the six months ended June 30, 2022, as the comparative period was prior to ownership of its subsidiary, Nano One Materials Candiac Inc. ("Nano Candiac").

- General and administrative expenses:

  The primary cause of the increase is higher insurance premiums, rent, and increased travel and related expenses. Insurance amounts expensed during the six months ended June 30, 2023, totalled approximately $161,000. The other key components of general and administrative expenses for the six months then ended include meals, transport and accommodations, as well as expensed computer hardware, software, licenses and products.

- Professional and consulting:

  Legal fees totalled approximately $130,000 (decrease of approximately $251,000), patent filing fees increased to approximately $312,000 (increase of approximately $167,000) as a result of greater operational activity overall. People & Culture expenses, advisory and capital markets services and consultancy, and IT consulting increased individually and in aggregate to approximately $761,000 (increase of approximately $345,000).

- Wages, benefits and fees, net:

  Personnel levels continue to increase and the primary driver of the change over the comparative quarter is the inclusion of the Nano Candiac team for the current period. Wages, benefits and fees is presented net of allocations of SDTC funding.

Government Assistance

The Company receives funding from various Canadian federal and provincial government programs. During the six months ended June 30, 2023 and June 30, 2022 the following amounts were received:

Amounts received:	June 30, 2023 $	June 30, 2022 $
Sustainable Development Technology Canada (SDTC)	3,284,507	-
Industrial Research Assistance Program (NRC-IRAP)	77,407	136,768
Other Grants	33,865	-
	3,395,779	136,768

SDTC Pre-Commercial Trial and Multi Cathode Piloting Hub Project (active):

On February 13, 2023, the Company executed an agreement with SDTC in respect of a new government program (Pre-Commercial Trial and Multi Cathode Piloting Hub) (the “SDTC Pre-Commercial Project”) which will provide the Company with $10,000,000 ($3,284,507 received as at June 30, 2023) in funding from SDTC in stages. The funds are non-dilutive, and non-repayable and are intended to support the Company’s design, construction, and operation of a multi-cathode piloting hub in Candiac. The initial project timeline is from January 1, 2023 to December 31, 2025.

The funds from the SDTC Pre-Commercial Project will be paid to the Company in four (4) instalments plus the remaining unpaid release of a final 10% hold-back upon satisfactory review and approval of the project by SDTC. The instalments from SDTC will be paid to the Company at the beginning of each of the four (4) Milestones.

During the six months ended June 30, 2023, the Company received Milestone 1 funds of $3,284,507.

SDTC Scaling Project (completed):

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 Scaling Project”). As at June 30, 2023 and $7,742,210 had been received (no change from prior year). The remaining $803,290 relating to the final 10% hold-back was subsequently received in July 2023.

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

	June 30, 2023 $	December 31, 2022 $
Sustainable Development Technology Canada (SDTC) and BC-ICE	13,108,014	9,823,507
Automotive Supplier's Innovation Program (ASIP)	1,950,952	1,950,952
Industrial Research Assistance Program (NRC-IRAP)[1]	1,501,331	1,423,924
Other Grants	212,585	178,720
	16,772,882	13,377,103

[1] Includes amounts from the Innovation Assistance Program (IAP) from NRC-IRAP.

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 $
June 30, 2023	-	(7,687,742)	(0.07)
March 31, 2023	-	(8,076,104)	(0.08)
December 31, 2022	-	(5,090,271)	(0.02)
September 30, 2022	-	(2,002,962)	(0.05)
June 30, 2022	-	(4,415,217)	(0.05)
March 31, 2022	-	(4,312,314)	(0.03)
December 31, 2021	-	(2,462,276)	(0.02)
September 30, 2021	-	(1,767,249)	(0.03)

There are no significant seasonal variations in quarterly results as the Company is not subject to significant seasonality in its research and corporate activities.

Financial instrument risk exposures:

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 $30,000. Additionally, the Company is exposed to commodity price risk including exposure to the fluctuating market prices of lithium as it relates to lithium raw materials within inventory. Any adjustments to the Company's lithium inventory in respect of market fluctuations are included within research and operational expenses.

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

- The quarters ended June 30, 2023 and March 31, 2023, were the first two full quarters inclusive of the results of operations from Nano Candiac including general and administrative expenses, research and operational expenses, and wages, benefits, and fees.
- The quarter ended December 31, 2022, included the acquisition of Nano Candiac. 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.

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 period in which the net proceeds had been fully utilized, 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 amounts):

	Transactions six months ended June 30, 2023 $	Transactions six months ended June 30, 2022 $	**Balances outstanding June 30, 2023 $**	Balances outstanding December 31, 2022 $
Bedrock Capital	75,000	75,000	-	-
DBM CPA	113,000	81,650	17,325	11,844
Directors' fees	162,759	114,521	-	-
Management and directors' fees (within wages, benefits and fees)	350,759	271,171	17,325	11,844
Wages, benefits and fees (officers)	1,546,416	782,115	-	-
Share-based payments (directors and officers)	413,610	683,893	-	-
Patent Filing Specialists (professional and consulting; and intangible assets)	274,267	126,132	14,080	11,795
	2,585,052	1,863,311	**31,405**	23,639

(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, net 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; Alex Holmes, COO; Pamela Kinsman, Corporate Secretary/Director of Sustainability; Denis Geoffroy, Chief Commercialization Officer (CCO); Adam Johnson, Senior Vice-President of External Affairs; and Kelli Forster, Senior Vice-President of People & Culture.

  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 Executive 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 compensation to non-executive directors of the Company and committee chairpersons.

(c) Share-based payments:

- Includes amounts recognized on vesting of stock options and Equity Incentives granted to directors and officers.
- During the six months ended June 30, 2023, the Company granted 311,784 RSUs and DSUs to various directors and officers (2022 – 189,424 RSUs granted).

LIQUIDITY AND CAPITAL RESOURCES

As at June 30, 2023, the Company had working capital of approximately $30,000,000.

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 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 six months ended June 30, 2023. 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 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 liquid and redeemable on demand (cash equivalents) and have original terms not exceeding 12 months.

As at June 30, 2023 and December 31, 2022, the Company had excess capital invested in a HISA, a HISA fund, and GICs, which facilitates the diversification of treasury amongst high-credit quality Canadian chartered banks. These holdings are accessible on demand or cashable. During the six months ended June 30, 2023, the Company earned interest income of approximately $820,000 (2022 - $175,000) from its treasury investments.

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, and approximately $3,800,000 in 2023), 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 are above *“Use of Proceeds from Financings”*.

Contractual obligations

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

As at June 30, 2023	Carrying amount $	Contractual cash flows $	Under 1 year $	1-5 years $	More than 5 years $
Accounts payable and accrued liabilities	4,812,984	4,812,984	4,812,984	-	-
Accounts payable to related parties	31,405	31,405	31,405	-	-
Lease liabilities	1,046,481	1,224,452	411,826	793,193	19,433
Total	**5,890,870**	**6,068,841**	**5,256,215**	**793,193**	**19,433**

The Company acquired two additional facility leases at its Burnaby location. The commencement date of the leases was February 1, 2023.

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	104,434,440	n/a
Stock options outstanding	5,026,347	3.00
Warrants outstanding	-	-
RSUs/DSUs outstanding	605,054	n/a
Fully diluted	**110,065,841**	

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 six months ended June 30, 2023.

Critical judgments in applying accounting policies

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

There are no new accounting standards issued for adoption in future periods for which the Company anticipates having 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 six months ended June 30, 2023, 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.