Nano One Materials Corp.

Management's Discussion & Analysis

June 30, 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 three and six months ended June 30, 2021, should be read in conjunction with the Company's condensed interim financial statements for the six months ended June 30, 2021, and the annual audited financial statements for the year ended December 31, 2020. 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. Additional information relating to the Company, including the Annual Information Form ("AIF") dated March 15, 2021, is filed with Canadian securities regulatory authorities (www.sedar.com) and on the Company's website at www.nanoone.ca.

The information contained herein is presented as at **August 9, 2021** (the "MD&A Date"), unless otherwise indicated.

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 TSX Venture Exchange (the "TSX-V") under the symbol "NNO". 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 six months ended June 30, 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.

CORE BUSINESS AND STRATEGY

The Company has developed, patented and scaled-up an innovative One-Pot Process (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 demonstrated its technology in the laboratory, built a demonstration pilot plant, and is partnering with key automotive original equipment manufacturers ("OEMs") and cathode manufacturers, with the business intent of licensing its technology through joint venture and royalty arrangements.

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 to simplify production using environmentally sustainable processes. It is a manufacturing platform suited to many types of lithium-ion cathode materials, and applies to automotive, grid storage and consumer electronic batteries, including standard, advanced, and next generation solid state batteries.

One-Pot Process Technology

Nano One's patented 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. Specifically, this eliminates the need to convert metal to metal sulphate and lithium to lithium hydroxide, and also eliminates sulphate waste, excess water consumption, excess greenhouse gas emissions ("GHG") and added process costs. The process uses lithium feedstock in the form of carbonate rather than hydroxide, which is 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 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.

Nano One's process consists of three stages, and the major innovations lie in the first stage where a special mode of combining reactants controls crystal nucleation and growth of particles, while converting the input materials into a proprietary composite powder that readily fires in a downstream kiln to form coated nanocrystal cathode powders. Nucleation is the self-assembly of molecules into an organized structure. The desired nano-scale or superfine structure is formed in the first stage of the production cycle and eliminates many steps common to the incumbent industrial processes.

The desired crystal structure, morphology and performance enhancing coatings of the materials are formed readily and simultaneously in the final thermal processing steps, eliminating extra coating steps and the need for long and repeated kiln firings. The process produces crystalline material powders that are configurable to meet a variety of energy density requirements.

Coated Nanocrystal Technology

The coated nanocrystal innovation addresses a key battery trade-off between energy density and durability. Increased durability would provide 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 crystal cathode material simultaneously with its protective coating.

There is a global effort to increase the ratio of nickel to cobalt in NMC (Lithium Nickel Manganese Cobalt Oxide) cathode materials, in order to increase capacity and reduce cobalt supply chain risks can be reduced; however, the shift to these nickel-rich materials compromises cycle life and safety in the battery. Coated monocrystalline cathode powders can address these problems and the Company's coated nanocrystals provide similar improvements to durability as evidenced through the Company's published results and portfolio of intellectual property.

The coated nanocrystal technology applies to all of the cathode materials and compositions under development by the Company, including:

- **(LFP):** Lithium Iron Phosphate;
- **(LNMO or HVS)**: Lithium Nickel Manganese Oxide, also referred to as "High Voltage Spinel"; and
- **(NMC):** Lithium nickel manganese cobaltate.

Additional information on the Company's coated nanocrystal technology can be found in the Company's AIF, including technical updates, published results and patents granted.

M2CAM Technology

In February 2021, Nano One announced the launch of its M2CAM technology (metals to cathode active materials) which seeks to reduce cost, waste, and the carbon footprint in the lithium-ion battery supply chain. The Company is in 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 nickel, manganese, and cobalt metal powder feedstocks rather than metal sulfates or other salt 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.

Nano One's technology also offers the flexibility to use either lithium carbonate or hydroxide as feedstocks. This is enabled by mixing lithium with all other metal inputs in Nano One's patented One-Pot Process reaction to produce a fully-lithiated mixed-metal intermediate powder that is neither carbonate nor hydroxide, allowing it to react and form finished cathode powder when thermally processed in a furnace.

In contrast, conventional cathodes are made by first converting metals into metal sulfates and lithium into lithium hydroxide. The metal sulfates are then mixed in a chemical reaction to produce a mixed metal nickel manganese cobalt precursor powder ("PCAM"), with the sulfate and water going to waste. This PCAM is then milled with lithium hydroxide powders after a prolonged firing, form dense clusters of crystalline particles (polycrystalline). Protective coatings can then be formed by adding additional materials and firing again. However, crystals, within each grain of powder, contract and break apart from repeated charging, and this fractures the protective coatings and leaves individual crystals within the grains of powder exposed to side reactions. Extra time in the kiln can alleviate some of these issues, but also damages the crystal structures and adds cost.

Nano One's technology aligns it with the sustainability objectives of automotive companies, investment communities and governmental infrastructure initiatives. It also offers an opportunity for metals refiners to provide environmentally, and sustainability mined sources of nickel ore to integrate and manufacture cost-reduced value-added cathode powders for direct supply to battery manufacturers.

BUSINESS OBJECTIVES

The Company's short-term objectives (1-3 years) include:

- Developing, advancing, and promoting the M2CAM adaption of its One-Pot process through collaborative partnerships with OEMs, miners and cathode producers. The Company is aiming to disrupt the supply chain and make cathode materials direct from metal powders and lithium carbonate. This eliminates the conversion of metals to sulfates, lithium to hydroxide and the associated energy, GHG emissions, cost, waste and the needless 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 and building its first internationally located demonstration pilot plants and commercial plant(s), and establishing joint ventures and licensing agreements, by advancing partnerships (Pulead, Volkswagen, Asian Cathode Manufacturer, and others, including undisclosed US automotive partners, global metals miners and the Chilean Clean Technology Institute) with the goal of initial revenues in late 2022 or 2023.

Third-party validation and partner identification with its joint development partners are already in place with additional automotive, cathode and mining partners in the queue and targeted throughout the supply chain.

RECENT CORPORATE DEVELOPMENTS

In addition to information discussed throughout this MD&A, the Company has also announced the following recent corporate developments:

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. Work is now 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, and the LNMO materials have met phase one and two metrics for performance and economics.

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. It delivers energy and power on par with other high-performance cathodes and is more cost effective because it is cobalt free, low in nickel and does not require excess lithium.

LNMO's three dimensional spinel structure enables lithium ions to flow more quickly than other types of cathode for fast charging and discharge and keeps it from expanding, contracting and straining the battery. 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.

Co-Development Agreement with CBMM (Frame Cooperation Agreement ("FCA"))

On May 6, 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 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.

Joint Development Agreement with Johnson Matthey

On June 3, 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 will 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. The agreement will focus on developing materials, methods of production and a detailed commercialization study for pre-pilot, pilot and scaled up manufacturing. The agreement is the culmination of successful technical reviews and preliminary evaluations of both Nano One's high nickel cathode materials and IP conducted over the past year and represents a significant milestone in the business relationship between both companies.

Graduation to the Toronto Stock Exchange

On June 8, 2021, the Company's common shares commenced trading on the TSX under the symbol "NANO" and ceased trading on the TSX-V.

Intellectual Property

On June 17, 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.

As at the MD&A Date, the Company has been issued nineteen (19) patents and has several related patent applications pending 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 ($4,291,516 received as of the MD&A Date). SDTC Program #2 is estimated conclude in June 2024. The SDTC Program #2 grant involves contributions from SDRC and the Innovative Clean Energy ("ICE") Fund of the Province of British Columbia's Ministry of Energy, Mines and Petroleum Resources (whom will be contributing $3,033,000 to the SDTC Program #2).

As of the date of this MD&A, the Company is currently completing the reporting for the conclusion of Milestone 2. Upon commencement of Milestone 3, the Company is expecting to receive approximately $1,477,000 during the next fiscal quarter.

During the six months ended June 30, 2021 and June 30, 2020 the following amounts were received (repaid) from (to) the Government of Canada for its research activities through various programs:

	June 30, 2021 $	June 30, 2020 $
Grant cash proceeds received (repaid):		
Sustainable Development Technology Canada (SDTC) - COVID-19 relief	262,500	250,000
Innovation Assistance Program (IAP)	-	194,606
Industrial Research Assistance Program (NRC-IRAP)	(8,394)	78,270
Other Grants	-	2,700
	254,106	525,576

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

	June 30, 2021 $	December 31, 2020 $
Sustainable Development Technology Canada (SDTC)	6,372,813	6,110,313
Automotive Supplier's Innovation Program (ASIP)	1,950,952	1,950,952
Industrial Research Assistance Program (NRC-IRAP)	786,572	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
	9,530,282	9,276,176

OVERALL PERFORMANCE

Cash flows

During the six months ended June 30, 2021, the Company generated a net increase in cash and cash equivalents of approximately $27,565,000 inclusive of the short-form prospectus financing of common shares completed on April 1, 2021 for gross proceeds of approximately $28,900,000 (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 $4,548,000;
- The maturity of a short-term investment of approximately $1,009,000; and
- Proceeds from Government assistance programs mainly comprising $262,500 from Sustainable Development Technology Canada ("SDTC").

See "Cash flows during the six months ended June 30, 2021" below within Discussion of Operations for further details on cash flows for the period.

DISCUSSION OF OPERATIONS

For the three and six months ended June 30, 2021 and June 30, 2020

The Company reports operating results in a single operating segment being the development 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.

The following table summarizes the Company's results of operations and cash flows for the three months ended June 30, 2021 and June 30, 2020 (rounded):

	Three months ended		
	June 30, 2021 $	June 30, 2020 $	**Change $**
Revenue	**-**	-	**-**
Loss from operating expenses	**(2,605,000)**	(559,000)	**(2,046,000)**
Loss and comprehensive loss	**(2,549,000)**	(542,000)	**(2,007,000)**
Cash used in operating activities	**(2,419,000)**	(787,000)	**(1,632,000)**
Cash provided by (used in) investing activities	**624,000**	(828,000)	**1,452,000**
Cash provided by financing activities	**26,927,000**	6,368,000	**20,559,000**

The following table summarizes the Company's results of operations and cash flows for the six months ended June 30, 2021 and June 30, 2020 (rounded):

	Six months ended		
	June 30, 2021 $	June 30, 2020 $	**Change $**
Revenue	**-**	-	**-**
Loss from operating expenses	**(7,057,000)**	(1,629,000)	**(5,428,000)**
Loss and comprehensive loss	**(7,094,000)**	(1,605,000)	**(5,489,000)**
Cash used in operating activities	**(4,082,000)**	(2,450,000)	**(1,632,000)**
Cash provided by (used in) investing activities	**273,000**	(1,179,000)	**1,452,000**
Cash provided by financing activities	**31,374,000**	10,815,000	**20,559,000**

Certain components of operating expenses for three months ended June 30, 2021 and June 30, 2020, were as follows (rounded):

	Three months ended		
	June 30, 2021 $	June 30, 2020 $	**Increase (decrease) $**
Consulting fees	**85,000**	26,000	**59,000**
Investor relations and shareholder information	**246,000**	149,000	**97,000**
Management and Directors' fees	**83,000**	239,000	**(156,000)**
Salaries and benefits, net	**341,000**	134,000	**207,000**
Share-based payments	**405,000**	-	**405,000**

Certain components of operating expenses for six months ended June 30, 2021 and June 30, 2020, were as follows (rounded):

	Six months ended		
	June 30, 2021 $	June 30, 2020 $	**Increase (decrease) $**
Consulting fees	**241,000**	242,000	**(1,000)**
Investor relations and shareholder information	**375,000**	262,000	**113,000**
Management and Directors' fees	**167,000**	281,000	**(114,000)**
Salaries and benefits, net	**1,037,000**	532,000	**505,000**
Share-based payments	**3,476,000**	-	**3,476,000**

Explanations for the changes illustrated in the table above are as follows for the three and six months ended June 30, 2021:

- Consulting fees:

  For the six months ended June 30, 2021, consulting fees on an overall basis was nearly equivalent to the comparative period, however, the composition differed on a comparative basis as the Company incurred higher human resources contractor fees, and IT contractor fees in the current year while capital markets consulting fees decreased by approximately $88,000.

  For the three months ended June 30, 2021, the impact of adding additional capital market and advisory consultants during the latter portion of 2020 and early 2021, resulted in advisory fees increasing by approximately $18,000 for the quarter relative to the comparative quarter. Additionally, to facilitate the Company's expansion and increased staffing levels the Company incurred additional human resources and IT consulting fees of approximately $41,000 for the quarter relative to the comparative quarter.

- Investor relations and shareholder information: increased on a net basis as the increase in additional investor relations programs, activities and targeted efforts which ramped up during late Q1 2021 and through to Q2 2021 as well as additional investor relations service engagements exceeding the decrease in marketing communication and conference attendance activities.

- Management and Directors' fees: decreased on a net basis. During the six months ended June 30, 2021 the Company incurred higher CFO fees and a compensation adjustment increase for the Company's Executive Chairman (see Salaries and benefits below), however, the 2020 comparative amount is greater on a three and six month basis due to bonuses paid during the three months ended June 30, 2020.
- Salaries and benefits: increased as a result of increasing research personnel during both the three and six months ended June 30, 2021, as well as compensation adjustments for the Company's Officers which was effective from January 1, 2021. Salaries and benefits are presented net of allocations of SDTC government grants. During the three and six months ended June 30, 2021, the Company welcomed 9 and 12 research staff members, respectively, to its team.
- Share-based payments: was incurred as a result of the grant of an aggregate of 1,863,950 stock options in February and June 2021 and an accrual for vesting from the grant dates through to June 30, 2021. The grant of stock options were to key management personnel, employees, and consultants which had a weighted average fair value on the grant date of $2.56 each. There were no stock options granted or vesting during the comparative period.

Research expenses, net for the three and six months ended June 30, 2021 and June 30, 2020, were as follows (rounded):

	Three months ended			Six months ended		
	June 30, 2021 $	June 30, 2020 $	**Change $**	**June 30, 2021 $**	June 30, 2020 $	**Change $**
Contractors	**34,000**	34,000	**-**	**100,000**	111,000	**(11,000)**
Labour	**555,000**	344,000	**211,000**	**1,132,000**	709,000	**423,000**
Safety and training	**36,000**	8,000	**28,000**	**48,000**	17,000	**31,000**
Supplies	**152,000**	73,000	**79,000**	**287,000**	125,000	**162,000**
Utilities	**13,000**	9,000	**4,000**	**23,000**	16,000	**7,000**
	790,000	468,000	**322,000**	**1,590,000**	978,000	**612,000**
Depreciation	**191,000**	41,000	**150,000**	**255,000**	79,000	**176,000**
Cost recoveries	**-**	(224,000)	**224,000**	**(79,000)**	(224,000)	**145,000**
Government assistance received/accrued	**(4,000)**	(211,000)	**207,000**	**(267,000)**	(526,000)	**259,000**
Government assistance repaid	**-**	-	**-**	**8,000**	-	**8,000**
Government assistance amortized	**(21,000)**	(264,000)	**243,000**	**(507,000)**	(432,000)	**(75,000)**
Research expenses (recoveries), net	**956,000**	(190,000)	**1,146,000**	**1,000,000**	(125,000)	**1,125,000**

During the three and six months ended June 30, 2021, the Company significantly increased its research expenditures in relation to its Frame Cooperation Agreement executed with CBMM (May 2021), the world's major supplier of niobium, aimed at optimizing Nano One's patented One-Pot process for nickel rich cathode materials (NMC) using CBMM's niobium as a protective coating.

Additionally, there has been a significant focus on efforts relating to the Joint Development Agreement signed with an Asian cathode manufacturer (August 2020) which is focused on LNMO cathode materials with work shifting to scale-up considerations, detailed economic analysis, third-party evaluation, and preliminary planning for commercialization. Significant progress was also made in LNMO scale up and optimization. Lastly, the Company is also progressing scaling efforts relating to the Cathode Evaluation Agreement (December 2020) with an American based multinational auto manufacturer to jointly evaluate the performance and commercial benefit of Nano One's patented One-Pot process for nickel-rich and cobalt-free cathode materials (NMC) in electric vehicle applications.

Moreover to the research expenses (recoveries), net amount presented above, the Company incurred approximately $26,000 and $60,000 respectively, during the three and six months ended June 30, 2021, within professional fees for charges relating to patent filings and applications, and increased capital expenditures by approximately $427,000 relative to the comparative six month period which was characterized primarily by purchases/deposits on research and development equipment as well as leasehold improvements.

Supplies primarily comprises chemical formulations which may be subject to fluctuations in commodity prices. Overall, the Company's exposure to fluctuations in commodity prices is not expected to have a significant impact on operations given the relative value of volumes purchased. Contractors include 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 research workforce expansion is a direct result of the increasing global interest in 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.

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 executives and others 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 date hereof, the Company had qualified for and received an additional $512,500 from SDTC, and approximately $241,000 from the Innovative Assistance Program (NRC-IRAP), both in relation to COVID-19 pandemic relief.

Cash flows during the six months ended June 30, 2021

Cash used in operating activities was approximately $4,082,000, largely driven by $3,359,000 incurred on cash-based operating expenses plus approximately $723,000 in changes in working capital items.

Cash provided by investing activities was approximately $273,000, driven by the maturity of a short-term investment (a fixed rate non-redeemable guaranteed investment certificate) including interest income received of approximately $1,103,000, partially offset by approximately $830,000 in equipment deposits, purchases of property and equipment (primarily research equipment and leasehold improvements) and payments for issuance costs of newly issued patents (intangible assets).

Cash provided by financing activities was approximately $31,374,000 substantially comprising the net proceeds from the short-form prospectus financing of common shares that closed on April 1, 2021, and the exercise of stock options and warrants generated net proceeds of approximately $31,460,000 after cash commissions, legal and filing fees. Cash flows from financing activities are partially reduced by lease payments of the Company's facilities of approximately $86,000 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 $
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)
December 31, 2019	-	(529,851)	(0.01)
September 30, 2019	-	(732,660)	(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 June 30, 2021 was 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 share-based payment expense 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).
- The quarters ended December 31, 2019 and September 30, 2019 represented a focus on cost savings measures prior to financing obtained via private placement during February 2020.

Use of Proceeds from Financings

The Company has completed the following recent financings:

- On February 21, 2020 (the "First Financing"), the Company completed a non-brokered private placement for gross proceeds of $10,999,750. The net proceeds of the placement after deducting finders' fees, legal, filing and other fees of $618,358 were $10,381,392;
- On October 29, 2020, the Company completed a Short Form Prospectus financing for gross proceeds of $14,369,488. The net proceeds of the financing after deducting finders' fees, legal, filing and other fees of $1,250,497 were $13,118,991; and
- On April 1, 2021, the Company completed a Short Form Prospectus financing for gross proceeds of $28,916,750. The net proceeds of the financing after deducting the cash underwriters' commission and expenses, legal, filing and other fees of $2,005,376 were $26,911,374.

For the period from closing of the First Financing to June 30, 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	**3,719,189**
Capital equipment purchases and leasehold improvements on laboratory facilities	**2,328,656**
Pilot plant expansion	**356,322**
Intellectual property acquisition	**279,128**
Business development and strategic alternatives	**510,110**
Working capital	**4,807,459**
Subtotal	**12,000,864**
Unallocated	**38,410,893**
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 related parties (gross before applicable government assistance recoveries):

	Transactions six months ended June 30, 2021 $	Transactions six months ended June 30, 2020 $	**Balances outstanding June 30, 2021 $**	Balances outstanding December 31, 2020 $
Bedrock Capital	75,000	280,500	-	-
DBM CPA	64,775	43,000	9,870	7,875
Directors' fees	27,000	-	-	-
Management and Directors' fees	166,775	323,500	9,870	7,875
Officers - Salaries	720,700	487,500	-	2,696
Directors and Officers - Share-based payments	3,156,085	-	-	-
Patent Filing Specialists	69,385	61,830	5,671	38,753
	4,112,945	872,830	**15,541**	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 Directors' fees paid to two of the Company's Directors (Joseph Guy, $13,500) and (Lyle Brown, $13,500).

(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 six months ended June 30, 2021 are included within both intangible assets and professional fees (2020 – professional fees only).

(c) Salaries and benefits:

- Includes salaries and short-term variable cash-based compensation incentives paid to Dan Blondal, CEO ($263,950), Stephen Campbell, CTO ($153,000), John Lando, President ($186,250), and Alex Holmes, COO ($117,500). Expense reimbursements outstanding as at December 31, 2020 related to Dan Blondal.

(d) Share-based payments:

- Includes amounts recognized on vesting of stock options granted to Directors and Officers. During the six months ended June 30, 2021, 1,540,000 stock options (2020 – none) were granted to Directors and Officers which are exercisable at $5.10. 1,140,000 stock options are exercisable for three years until February 1, 2024

and vested immediately, and 400,000 stock options are exercisable for five years until February 1, 2026 and vest over 24 months.

LIQUIDITY AND CAPITAL RESOURCES

As at June 30, 2021, the Company had working capital of approximately $55,138,000.

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 six months ended June 30, 2021.

The Company currently has no source of revenues, though it receives funding from government assistance 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 short-term investments (guaranteed investment certificates "GICs") bearing fixed rates of interest that are either redeemable or non-redeemable 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). As at June 30, 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 Company's primary sources of capital and liquidity during the six months ended June 30, 2021 and during the previous fiscal year ended 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 $54,300,000 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 $14,400,000; 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 six months ended June 30, 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 June 30, 2021	Carrying amount $	Contractual cash flows $	Under 1 year $	1-3 years $	3-5 years $	More than 5 years $
Accounts payable and accrued liabilities	424,127	424,127	424,127	-	-	-
Accounts payable to related parties	15,541	15,541	15,541	-	-	-
Lease liabilities	869,100	869,100	209,477	563,066	233,194	89,181
Total	**1,308,768**	**1,308,768**	**649,145**	**563,066**	**233,194**	**89,181**

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	95,341,903	n/a
Stock options outstanding	6,110,800	2.71
Warrants outstanding	4,501,637	2.57
Fully diluted	**105,954,340**	

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 annual financial statements for the year ended December 31, 2020.

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 six months ended June 30, 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 policy changes

During the six months ended June 30, 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, 2021. The Company has reviewed these updates and determined that many of these updates are not applicable or consequential to the Company and have been excluded from discussion within these significant accounting policies.

Financial instruments – classification and fair value

Classification of financial instruments

Financial assets:	Classification:	Subsequent measurement:
Cash and cash equivalents	FVTPL	Fair value
Short-term investment	Amortized cost	Amortized cost
Receivables	Amortized cost	Amortized cost
Deposits	Amortized cost	Amortized cost

Financial liabilities:	Classification:	Subsequent measurement:
Accounts payable and accrued liabilities	Amortized cost	Amortized cost
Accounts payable to related parties	Amortized cost	Amortized cost
Lease liabilities	Amortized cost	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, 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.

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