Performance Through Carbon Chemistry

# MANAGEMENT'S DISCUSSION AND ANALYSIS
## For the years ended June 30, 2019 and 2018

**[Unless specified otherwise, all amounts are expressed in Canadian dollars]**

This Management's discussion and analysis (”MD&A”) provides a review of NanoXplore Inc.'s operations, performance and financial position for the years ended June 30, 2019 and 2018 and should be read in conjunction with the audited consolidated financial statements for the years ended June 30, 2019 and 2018. The purpose of this document is to provide information on our activities. The information contained herein is dated as of October 10, 2019. You will find more information about us on NanoXplore's website at **www.nanoxplore.ca** and on SEDAR at www.sedar.com, including all press releases.

The financial statements have been prepared in accordance with International Financial Reporting Standards (“IFRS”). The Company has consistently applied the accounting policies used in the preparation of its IFRS financial statements, including the comparative figures. The terms “we”, “our”, “us”, ‘’NanoXplore’’ or the “Company” mean NanoXplore Inc. and its subsidiaries, unless otherwise indicated.

## CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

This MD&A contains certain forward-looking statements with respect to the Company. Such forward-looking statements are dependent upon a certain number of factors and are subject to risks and uncertainties. Actual results may differ from those expected. We consider the assumptions on which these forward-looking statements are based to be reasonable, but we advise the reader that these assumptions with regard to future events, many of which are beyond our control, could prove incorrect as they are subject to risks and uncertainties inherent in our activities. Management does not assume any obligation to update or revise any forward-looking statements, whether as a result of new information of future events, except when required by the regulatory authorities.

This MD&A contains forward-looking statements. When used in this MD&A, the words ‘’may’’, ‘’would’’, ‘’could’’, ‘’will’’, ‘’intend’’, ‘’plan’’, ‘’anticipate’’, ‘’believe’’, ‘’seek’’, ‘’propose’’, ‘’estimate’’, ‘’project’’, ‘’expect’’ and similar expressions are intended to identify forward-looking statements. In particular, this MD&A contains forward-looking statements with respect to, among other things, business objectives, expected growth, results of operations, performance, business projects and opportunities and financial results. These statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking statements. Such statements reflect NanoXplore's then current views with respect to future events based on certain material facts and assumptions and are subject to certain risks and uncertainties, including without limitation changes in the risk factors described under the section risks and uncertainties of this statement. The forward-looking information is based on certain key expectations and assumptions made by NanoXplore, including expectations and assumptions concerning availability of capital resources, business performance, market conditions, customer demand. Although NanoXplore believes that the expectations and assumptions on which such forward-looking information is based are reasonable, undue reliance should not be placed on the forward-looking information since no assurance can be given that they will prove to be correct.

Many factors could cause NanoXplore's actual results, performance or achievements to vary from those described in this MD&A, including without limitation those listed above, those described under the section risks and uncertainties of this statement as well as the assumptions upon which they are based proving incorrect. These factors should not be construed as exhaustive. Should one or more of these risks or uncertainties materialize, or should assumptions underlying forward-looking statements prove incorrect, actual results may vary materially from those described in this MD&A as intended, planned, anticipated, believed, sought, proposed, estimated or expected, and such forward-looking statements should not be unduly relied upon. NanoXplore does not intend, and does not assume any obligation, to update these forward-looking statements except as required by law. The forward-looking statements contained in this MD&A are expressly qualified by these cautionary statements. Forward-looking information contained in this MD&A about prospective results of operations, financial position or cash flows is based on assumptions about future events, including economic conditions and proposed courses of action, based on NanoXplore's management's assessment of the relevant information currently available. Readers are cautioned that outlook information contained in this MD&A should not be used for the purposes other than for which it is disclosed herein or therein, as the case may be.

## BUSINESS OVERVIEW

### COMPANY OVERVIEW

NanoXplore Inc. and its subsidiaries (together "NanoXplore" or the "Company") is a graphene company, a manufacturer and supplier of high-volume graphene powder for use in industrial markets. Also, the Company provides standard and custom graphene-enhanced plastic and composite products to various customers in transportation, packaging, electronics, and other industrial sectors. The address of the Company's corporate office is 25, Boul. Montpellier, St-Laurent (Montreal), QC, Canada.

NanoXplore Inc. is listed on the TSX Venture Exchange and has traded under "GRA" and is also listed on the OTCQX and has traded under "NNXPF".

On November 23, 2017, through its wholly-owned subsidiary NanoXplore Switzerland Holding SA incorporated on November 9, 2017, the Company acquired all of the issued and outstanding shares of CEBO Injections SA, based in Switzerland. CEBO provides customers with high precision and high-quality injection molded products, and serves the automotive, medical, industrial and watches manufacturing markets. CEBO has expertise in highly precise parts, over molding, insert molding, and complex and precise parts and assemblies of plastic, metal and ceramic.

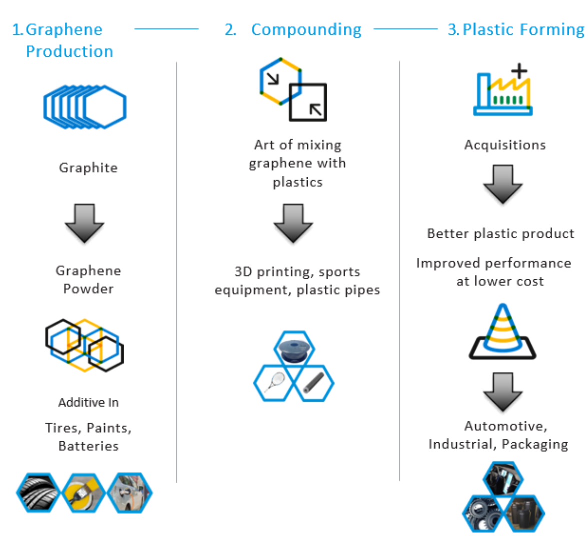
On September 21, 2018, the Company acquired all of the issued and outstanding shares of Sigma Industries Inc ("Sigma"). Sigma is a manufacturing company specializing in the manufacture of composite products that has three operating subsidiaries and employs approximately 275 people. It operates in the markets for heavy trucks, buses, public transit, machinery and wind energy. Sigma sells its products to original equipment manufacturers and distributors in the United States, Canada and Europe.

The Company has the following subsidiaries:

- NanoXplore GmbH, based in Germany, with an equity interest of 100%.
- 9334-7474 Québec Inc., based in Canada, with an equity interest of 100%. 9334-7474 Québec Inc. holds 100% of Rada Industries Ltd. ("Rada Industries"). On April 8, 2019, Rada Industries has ceased operations by selling its main assets. On April 9, 2019, Rada Industries changed its name to 9396-2173 Québec Inc.
- NanoXplore Switzerland SA, based in Switzerland, with an equity interest of 100%. NanoXplore Switzerland SA holds 100% of CEBO Injections SA. ("CEBO").
- Sigma Industries Inc., based in Canada, with an equity interest of 100% [2018 – nil]. Sigma has two active wholly-owned subsidiaries; Faroex Ltd., based in Manitoba, and Rene Composite Materials Ltd., based in Quebec. Rene Composite Materials Ltd has one active wholly-owned subsidiary; RMC Advanced Technologies Inc, based in Tennessee (USA).

### BUSINESS HIGHLIGHTS

Following the recent acquisition of CEBO and Sigma, the Company plans a vertical integration of the business, starting from the supply of the graphite to the production of graphene and enhanced plastic and composites parts to be used in our packaging and automotive applications.




On January 11, 2019, the Company completed a total financing of $30,988,240 which included issuance of 16,144,800 common shares at a price of $1.30 per share for gross proceeds of $20,988,240 and $10,000,000 of convertible unsecured subordinated debentures.

In January 2019, the Company expanded its executive management team with significant acquisitions; Mr. Rocco Marinaccio, former Vice President – Flexible Manufacturing Group of Martinrea International Inc., and Mr. Denis Bertrand, former Chief Executive Officer of Sigma Industries Inc., joined NanoXplore to act full-time as Chief Operating Officer and Chief Business Development Officer respectively.

Mr. Rob Wildeboer, currently acting as Executive Chairman of Martinrea International Inc., joined the Board of Directors of NanoXplore and was appointed as Chair of the Board of Directors of the Company in January 2019. Mr. Benoît Gascon, Chief Executive Officer of Mason Graphite Inc., who was serving as Chair of the Board of Directors, continued as Vice Chair. These new members will help to strategically position the Company for long-term success and will also have an impact on our operations as the Company builds its 10,000 metric tons/year graphene production facility during fiscal 2019 and 2020.

On April 8, 2019, the Company made the strategic decision to sell Rada Industries' main assets to a subsidiary of Roda Packaging Inc. which was a Rada Industries' customer. The Company's decision was based upon focusing on higher value-add graphene and graphene-enhanced plastic product.

Of the total of 12,205,193 warrants and broker warrants that were issued on August 2, 2017 and which expired on August 2, 2019, 12,158,687 (99.6%) were exercised throughout the last two years. For the period from July 1 to August 2, 2019, 9,365,651 warrants have been exercised for a cash proceeds of $6,442,041.

On September 9, 2019, Mason Graphite Inc. sold its entire NanoXplore ownership position that resulted in a transaction of 22,188,333 shares to a group of buyers that included Martinrea International Inc., Caisse de dépôt et placement du Québec and Investissement Québec.

**Manufacturing**

The Company has a graphene production facility of 50 metric tons/year capacity a year and a 400 metric tons/year capacity of master batch pellet in Montreal. The Company has also plastic and composites production facilities in Quebec, Manitoba and Vallorbe (Switzerland) with an additional plant under construction in the USA.

Concurrent with its recent financing, the Company started to build a facility eventually capable to produce 10,000 tons of graphene per year. In order to do so, the Company has set forth a feasibility study to define the design and cost parameters of the new plant in collaboration with DF Mining & Handling. The study envisions a modular graphene production plant consisting of 5 graphene production lines, each with a capacity of 2,000 metric tons/year. The report can be found on Sedar on August 27, 2018.

The Company has been working diligently to ensure that continual improvements are implemented during the facility's project development. As announced by press release on June 9, 2019, the new graphene facility layout has been finalized and fully optimized. This optimization will allow the Company to add an additional graphene production line without the need of expanding the new facility as originally contemplated. Furthermore, significant developments in manufacturing efficiencies have bolstered single line graphene production output upon completion from 2,000 metric tons/year to 4,000 metric tons/year, doubling single line production capacity. This improvement was a result of a vigorous twelve-month R&D and engineering project that has been successfully tested and implemented at the Company's current production facility. These results were further validated through additional testing on the new facility's equipment at the suppliers' locations in the US and in Canada.

The Company has ordered all major long lead time equipment for Phase One (4,000 metric tons/year) development with expected delivery scheduled for the end of December 2019. All main equipment is being manufactured in America and Europe by reputable companies and all engineering related to these purchases has been completed. No further major equipment purchases will be needed. The detailed engineering related to electrical and mechanical for the major equipment has been completed and remains on-going for other components within the facility. The procurement has been completed for all major equipment and the Company has awarded contracts for the construction and automation of the new facility. The new graphene plant will be a fully automated production plant that will enable a connected and flexible manufacturing system.

The overall development for Phase One (4,000 metric tons/year) of the new facility is expected to be on time and under the original planned budget. More specifically, the construction process has already commenced, as indicated above, installation and commissioning of the new plant is expected to begin during the Company's fiscal Q2-2020 and all primary costs have been contracted and accounted for. The Company expects Phase One (4,000 metric tons/year), of a two-phase 10,000 metric tons/year production project, to be fully operational during calendar Q1 of 2020.

The expansion of the Sainte-Clotilde composites plant has been completed and the plant is now fully operational. This expansion is related to the long-term contract to manufacture components for a new vehicle program in one of the Sigma's principal markets. The contract, which represents new business for Sigma, is valid for the entire length of the program estimated between 7 to 10 years. Production should begin during the Company's 2020 fiscal year, based on current program expectations. This is an automated production chain project and stately modernization project for the fabrication of components for a new vehicle program.

**Research and Development**

The Company has a very active internal research and development effort and supplements this with external collaborations at many Canadian universities and research institutes. The Company is currently investing in research programs with McGill University, University of Waterloo, Institut national de la recherche scientifique (INRS-EMT), École de technologie supérieure (ETS), Centre de Technologie Minérale et de Plasturgie (CTMP), Concordia University and the National Research Council (NRC). The Company has highly qualified staff including several PhD qualifications, MSc, and engineering or science degrees. Our researches are mainly related to graphene/composite and to increase the strength-to-weight ratio of materials with graphene, and to use graphene to increase energy efficiency.

NOTABLE RESULTS THAT OCCURS DURING THE YEAR ENDED JUNE 30, 2019:

- By adding our GrapheneBlack™ powder and masterbatches to every day-use plastic, such as Polyethylene, the Company can increase the lifetime of these plastics by making them reusable. Degradation and thermal aging are the main reasons why many plastics are not reusable. GrapheneBlack™ protects plastics from these negative effects and provides our customers with a cost-effective and sustainable solution without disrupting the existing plastic supply chain;

- Significant improvements towards reducing the Company's input costs to produce graphene. We are now able to produce high-quality graphene using small natural flake graphite (-150 mesh). Small natural flake graphite is substantially cheaper than large flake graphite (+80 mesh). Large flake graphite is the current graphite of choice for the Lithium Ion battery market. Our ability to move away from larger flake higher demand will not only dramatically reduce input costs but will also help the Company secure a more readily available graphite supply, significantly reducing future supply risks; and

- Several trials are underway to incorporate the Company's GrapheneBlack™ products into composites through our subsidiaries and partners, some of which are incorporating GrapheneBlack™ into sheet molding compounded products for exterior and structural use in buses and heavy trucks, into pultruded fiber glass reinforced rods and profiles for outdoor applications, and into injection molded floors for agriculture.

**Sustainable Development Technology Canada ("SDTC")**

Since 2018, the Company began a project in collaboration with SDTC, an arm's-length foundation created by the Government of Canada. The project will demonstrate that through the strategic application of graphene to engineering plastics, the overall performance of many vehicle components (namely trucks, buses, unmanned aerial vehicles) can be significantly improved in terms of mechanical, thermal and electrical shielding performance, while meaningfully reducing weight. It is anticipated to be achieved at no cost premium to the customer. The Project's environmental benefits will be achieved through Greenhouse Gas ("GHG") savings related to light weighting of components and of the overall vehicle.

Subject to certain terms and conditions, SDTC will reimburse 33% of eligible project cost for a maximum of $3,250,000 for the period from September 1, 2017 to April 30, 2021.

## FINANCIAL HIGHLIGHTS

The following selected financial data are derived from the Consolidated Financial Statements of the Company for the following years:

| | 2019<br>$ | 2018<br>$ | 2017<br>$ |
|---|---|---|---|
| Revenues | **69,521,070** | 8,656,487 | 3,367,569 |
| Loss for the year | **(10,603,365)** | (6,123,913) | (2,125,266) |
| Basic loss per share | **(0.11)** | (0.08) | (0.04) |

| | 2019<br>$ | 2018<br>$ | Difference<br>$ | <br>% |
|---|---|---|---|---|
| **Consolidated Statements of Cash Flows** | | | | |
| Operating activities | **(3,939,203)** | (3,281,686) | (657,517) | 20% |
| Investing activities | **(15,944,178)** | (1,745,379) | (14,198,799) | 814% |
| Financing activities | **32,426,565** | 19,853,401 | 12,573,164 | 63% |
| **Net change in cash before net effect of currency exchange rate** | **12,543,184** | 14,826,336 | (2,283,152) | (15%) |

| | 2019<br>$ | 2018<br>$ | 2017<br>$ |
|---|---|---|---|
| **Consolidated Statements of Financial Position** | | | |
| Cash | **27,819,140** | 15,268,666 | 421,214 |
| Accounts receivable | **15,016,481** | 2,895,012 | 462,322 |
| Inventory | **7,589,896** | 1,542,863 | 293,317 |
| Right-of-use assets | **5,502,111** | — | — |
| Property, plant and equipment and equipment deposit | **31,230,797** | 6,488,020 | 3,383,184 |
| Intangible asset | **4,267,929** | — | — |
| Goodwill | **460,164** | — | — |
| Total assets | **92,844,734** | 26,886,737 | 4,736,483 |
| Operating loans | **1,339,480** | 1,328,400 | 215,000 |
| Long-term Debt and Convertible debentures - Loan | **32,566,411** | 4,567,970 | 2,162,705 |
| Total liabilities | **54,749,009** | 11,128,750 | 3,444,842 |
| Shareholder's Equity | **38,095,725** | 15,757,987 | 1,291,641 |

Variances are explained in the sections "**CONSOLIDATED OPERATIONS**" and "**FINANCIAL POSITION, LIQUIDITY AND CAPITAL RESOURCES**".

### Acquisition of Sigma Industries Inc.

On September 21, 2018, the Company acquired all of the issued and outstanding shares of Sigma for a total amount of $8,793,581 paid by the issuance of 4,579,988 common shares of its share capital to all existing shareholders of Sigma and acquired all the outstanding debentures of Sigma for a total amount of $9,993,500 of which $9,011,000 is paid by cash and $982,500 is paid by the issuance of 511,719 shares of its share capital to the Sigma Debentures Holders. The exchange ratio to determine the amount paid is based on a fixed price; each Sigma common share were exchanged for 0.39 common share of NanoXplore. The value of Sigma common shares has been set at $0.75 and the value of NanoXplore common shares has been set at $1.92.

Based on the stock price (TSX-V) of NanoXplore shares at the acquisition date of $1.61, the fair value of the total consideration paid amounted to $17,208,648 and is detailed as follows:

| | Number of shares | Fair value of shares $ | Paid by cash $ | Total consideration $ |
|---|---|---|---|---|
| All outstanding shares of Sigma | 4,579,988 | 7,373,780 | – | **7,373,780** |
| All outstanding debentures of Sigma | 511,719 | 823,868 | 9,011,000 | **9,834,868** |
| **Total** | **5,091,707** | **8,197,648** | **9,011,000** | **17,208,648** |

This transaction was financed using the Company's available cash.

The assets and liabilities of Sigma are included in the consolidated statement of financial position as at June 30, 2019 and the operating results are reflected in the Company's consolidated statement of loss since September 21, 2018. The results between the acquisition date and the year ended June 30, 2019 and the results if the combination had taken place at the beginning of fiscal year 2019 are as follows:

| | Year-end results $ | Since acquisition date - consolidated in NanoXplore results $ |
|---|---|---|
| Revenues | **74,558,239** | **59,454,752** |
| Net income | **1,007,401** | **595,815** |

## Selected Quarterly Information

| | | Revenue | Net loss | Basic and diluted loss per share | |
|---|---|---|---|---|---|
| Q4-2019 | June 30, 2019 | 22,745,880 | (4,717,098) | (0.04) | **Note 2 & 4** |
| Q3-2019 | March 31, 2019 | 20,720,455 | (2,736,849) | (0.03) | **Note 2 & 3** |
| Q2-2019 | December 31, 2018 | 22,147,009 | (1,550,237) | (0.02) | **Note 2** |
| Q1-2019 | September 30, 2018 | 3,907,726 | (1,599,181) | (0.02) | |
| Q4-2018 | June 30, 2018 | 3,250,531 | (1,622,962) | (0.02) | |
| Q3-2018 | March 31, 2018 | 2,985,281 | (1,137,515) | (0.01) | |
| Q2-2018 | December 31, 2017 | 1,807,020 | (1,020,915) | (0.01) | |
| Q1-2018 | September 30, 2017 | 613,655 | (2,363,238) | (0.04) | **Note 1** |

**Note 1** The higher loss than usual is explained by the listing expenses of $1,443,860 incurred in the RTO.
**Note 2** The higher revenue is explained by sales from Sigma, which are consolidated since September 21, 2018 in the results.
**Note 3** The higher loss than usual is due to an increase in salaries which is explained by the addition of strategic new positions and the grant of stock options.
**Note 4** The higher loss than usual is due to the sales of Rada Industries' equipment, which results in a loss $738,524 and to an increase in salaries which is explained by an increase of incentives and to the addition of strategic new positions.

## CONSOLIDATED OPERATIONS

| | 2019 $ | 2018 $ | Difference $ | % |
|---|---|---|---|---|
| **Revenues** | **69,521,070** | 8,656,487 | 60,864,583 | 703% |
| **Expenses** | | | | |
| Cost of sales | **57,594,615** | 6,490,645 | 51,103,970 | 787% |
| Research and development costs | **2,544,548** | 1,154,228 | 1,390,320 | 120% |
| Selling, general and administrative | **13,235,242** | 4,331,667 | 8,903,575 | 206% |
| Share-based compensation | **875,988** | 305,267 | 570,721 | 187% |
| Depreciation (production) | **2,563,856** | 621,427 | 1,942,429 | 313% |
| Depreciation (other) | **542,885** | 161,462 | 381,423 | 236% |
| Amortization | **508,298** | 37,114 | 471,184 | 1270% |
| Foreign exchange | **228,969** | 63,695 | 165,274 | 259% |
| | **78,094,401** | 13,165,505 | 64,928,896 | 493% |
| **Operating loss** | **(8,573,331)** | (4,509,018) | (4,064,313) | (90%) |
| **Non-recurring expenses** | | | | |
| Listing expenses | **—** | (1,443,860) | 1,443,860 | (100%) |
| Loss on disposal of PP&E | **(738,524)** | — | (738,524) | 100% |
| **Loss before income taxes and interests** | **(9,311,855)** | **(5,952,878)** | (3,358,977) | (56%) |
| Interest on long-term debt | **(1,657,677)** | (209,336) | (1,448,341) | 692% |
| Interest on lease liability | **(203,915)** | (14,321) | (189,594) | 1324% |
| Interest revenue | **342,698** | 103,386 | 239,312 | 231% |
| Loss on disposal of joint venture | **—** | (51,318) | 51,318 | (100%) |
| Share of loss of a joint venture | **—** | (3,392) | 3,392 | (100%) |
| **Loss before income taxes** | **(10,830,749)** | **(6,127,859)** | (4,702,890) | 77% |
| Current income taxes recovery (expense) | **(44,789)** | 49,768 | (94,557) | (190%) |
| Deferred income taxes recovery (expense) | **272,173** | (45,822) | 317,995 | 694% |
| **Loss for the year** | **(10,603,365)** | (6,123,913) | (4,479,452) | (73%) |
| **Other comprehensive loss** | | | | |
| *Items that may be subsequently reclassified to profit and loss:* | | | | |
| Exchange differences on translation of foreign subsidiaries | **(563)** | 13,490 | (14,053) | (104%) |
| *Items that will not be reclassified to profit and loss:* | | | | |
| Retirement benefits – Net actuarial gains | **25,954** | 131,812 | (105,858) | (80%) |
| **Total comprehensive loss** | **(10,577,974)** | (5,978,611) | (4,599,363) | (77%) |

## REVENUE

**Sales of products**

Sales of products increased by $60,864,583 in 2019 compared to the corresponding period in 2018 mainly due to the consolidation of Sigma's sales of $59,454,752.

## OPERATING COST

**Cost of sales**

Cost of sales increased is in line with the increase of sales for the year, which is mainly due to the consolidation of Sigma since September 21, 2018.

**Research and development costs**

The increase of $1,390,320 of research and development costs during 2019 is mainly due to the consolidation of Sigma expenses since September 21, 2018.

**Selling, general and administrative**

Out of the increase of $8,903,575 of expenses in 2019 compared to the corresponding period in 2018, approximately 65% is due to the consolidation of Sigma expenses since September 21, 2018 and CEBO's expenses since November 23, 2017. During the current year, the Company had to put in place a new organizational structure more suited to its business model in order to support the recent acquisition of Cebo and Sigma and the commercial activities of the graphene products. Consequently, salaries, professional fees, travelling and several other expenses have increased significantly.

**Non-recurring expenses**

Listing expenses amounts to nil in 2019 compared to $1,443,860 for 2018. The fees are related to the reverse takeover transactions of Graniz Mondal Inc.

On April 8, 2019, the Company made the strategic decision to sell the main operating assets of Rada Industries for an amount of $800,000 resulting in a loss on disposal of equipment of $738,524.

## FOURTH QUARTER RESULTS

| | 2019 | 2018 | Difference | |
|---|---|---|---|---|
| | $ | $ | $ | % |
| Revenues | **22,745,880** | **3,250,531** | 19,495,349 | 600% |
| Cost of sales | **19,154,026** | **2,549,933** | 16,604,093 | 651% |
| Depreciation and amortization | **1,560,325** | **371,305** | 1,189,020 | 320% |
| Other operating expenses | **5,594,267** | **1,956,739** | 3,637,528 | 186% |
| Loss for the period | **(4,717,098)** | **(1,622,962)** | (3,094,136) | (191%) |
| Basic loss per share | **(0.04)** | **(0.02)** | (0.00) | |

For the three-month period ended June 30, 2019, sales of products increased from $3,250,531 in 2018 to $22,745,880 in 2019, mainly due to the consolidation of Sigma's sales of $20,269,973.

General increase of expenses for the operating cost during 2019 is mainly due to the consolidation of Sigma's expenses, to an increase of global compensation and to the loss on disposal of equipment of $738,524 for Rada Industries.

During the fourth quarter, Sigma generated an operating profit of $900,231.

## FINANCIAL POSITION, LIQUIDITY AND CAPITAL RESOURCES

### CONSOLIDATED FINANCIAL POSITION

| | 2019<br>$ | 2018<br>$ | Difference<br>$ | Main reasons for significant differences |
|---|---|---|---|---|
| **Assets** | | | | |
| Cash | **27,819,140** | 15,268,666 | 12,550,474 | Increase due to private placement financing of $30.9M, offset by $9M to acquire Sigma, by PP&E acquisition of $8.6M and to normal operations |
| Accounts receivable | **15,016,481** | 2,895,012 | 12,121,469 | Increase mainly due to Sigma's acquisition |
| Inventory | **7,589,896** | 1,542,863 | 6,047,033 | Increase mainly due to Sigma's acquisition |
| Right-of-use assets | **5,502,111** | — | 5,502,111 | Early adoption of IFRS 16 |
| Property, plant and equipment, and equipment deposits | **31,230,797** | 6,488,020 | 24,742,777 | Increase mainly due to equipment acquired with Sigma's acquisition and to $8.6M related to the construction of the graphene plant and to the plant expansion in Sainte-Clotilde-de-Beauce |
| Intangible asset | **4,267,929** | 338,260 | 3,929,669 | Increase mainly due to Sigma's acquisition |
| Goodwill | **460,164** | — | 460,164 | Goodwill arising on Sigma's acquisition |
| Other assets | **958,216** | 353,916 | 604,300 | Increase mainly due to Sigma's acquisition |
| **Total assets** | **92,844,734** | 26,886,737 | 65,957,997 | |
| **Liabilities and shareholders' equity** | | | | |
| **Liabilities** | | | | |
| Accounts payable, accrued liabilities and income taxes payables | **14,997,652** | 2,953,461 | 12,044,191 | Increase mainly due to Sigma's acquisition |
| Deferred grant | **231,745** | 164,940 | 66,805 | |
| Contract liability | **2,512,994** | 145,012 | 2,367,982 | Increase mainly due to Sigma |
| Credit facilities | **1,339,480** | 1,328,400 | 11,080 | |
| Non-current portion of payable | **—** | 490,180 | (490,180) | Second payment related to the acquisition of Cebo due in Nov. 2019 is included in Accounts payable |
| Defined benefit liabilities | **870,329** | 782,290 | 88,039 | |
| Long-term debt | **24,862,997** | 4,567,970 | 20,295,027 | Increase due to new debt of $9.9M acquired with Sigma's acquisition and to the early adoption of IFRS 16 |
| Convertible debentures - Loan | **7,703,414** | — | 7,703,414 | Fair value of $10M of convertible debentures issued in the private placement financing of January 2019 |
| Deferred income taxes liabilities | **2,230,398** | 696,497 | 1,533,901 | Increase mainly due to Sigma |
| **Total liabilities** | **54,749,009** | 11,128,750 | 43,620,259 | |
| **Shareholders' equity** | | | | |
| Share capital | **53,445,389** | 23,502,555 | 29,942,834 | Issuance of share related to Sigma acquisition and financing of January 2019 |
| Reserve | **3,604,511** | 2,871,633 | 732,878 | Increase due to share-based expenses related to the 2.5M stock options granted during the year |
| Convertible debentures – Options | **2,240,000** | — | 2,240,000 | Fair value of the conversion option attached to the convertible debentures |
| Foreign currency translation reserve | **12,927** | 13,490 | (563) | |
| Deficit | **(21,207,102)** | (10,629,691) | (10,577,411) | Losses of the year |
| **Total Shareholders' equity** | **38,095,725** | 15,757,987 | 22,337,738 | |
| **Total Shareholders' equity and liabilities** | **92,844,734** | 26,886,737 | 65,957,997 | |

## CASH FLOW

| | 2019<br>$ | 2018<br>$ | Difference<br>$ | <br>% |
|---|---|---|---|---|
| Cash used in operating prior to changes in non-cash working capital | **(5,101,745)** | (3,736,344) | (1,365,401) | (37%) |
| Changes in non-cash working capital | **1,162,542** | 454,658 | 707,884 | 156% |
| **Operating activities** | **(3,939,203)** | (3,281,686) | (657,517) | (20%) |
| **Investing activities** | **(15,944,178)** | (1,745,379) | (14,198,799) | (814%) |
| **Financing activities** | **32,426,565** | 19,853,401 | 12,573,164 | 63% |
| **Net effect of currency exchange rate on cash** | **7,290** | 21,116 | (13,826) | (65%) |
| **Net change in cash** | **12,550,474** | 14,847,452 | (2,296,978) | (15%) |

**Operating activities**

Cash flows used in operating activities in 2019 increased by $1,365,401 before changes in non-cash working capital compared to the same period of last year. The increase is mainly explained by an increase in total compensation (additional employees, severance payments, salary and incentive increase) and other expenses related to the new organizational structure put in place in order to support the recent acquisition of Cebo and Sigma and the commercial activities of the graphene products.

Since its acquisition, Sigma has generated $2,570,727 of cash in operating activities prior to changes in working capital. Changes in non-cash working capital was negative of $261,026 which bring the net operating activities impact of $2,309,701.

**Investing Activities**

Cash flows used in investing activities in 2019 are mainly related to the acquisition of Sigma during September 2018 for a net cash amount of $7.3M and to the net increase of $8.6M of addition of property, plant and equipment. These additions are mostly for the construction of the graphene plant in Montreal ($0.9M) and for the plant expansion located in Sainte-Clotilde-de-Beauce ($7.4M)

**Financing activities**

Cash flows generated in financing activities in 2019 and 2018 are related to private placement financings. In January 2019, the Company completed a brokered private placement financing of $20,988,240 and a private placement financing of $10,000,000 of convertible unsecured subordinated debentures. During the year ended in June 30, 2018, the Company completed a brokered private placement financing of subscription receipts of $9,697,082 and a second private placement financing of $10,000,155.

## LIQUIDITY AND CAPITAL RESOURCES

Management believes that the Company has sufficient funds to meets its obligations, operating expenses and some development expenditures for the ensuing 12 months as they fall due. The Company's ability to continue its development activities is dependent on the beginning of the commercial operation of the graphene products. The graphene commercial activity is in the development stage and, as a result, the Company has minimal source of operating revenue from those operations and is dependent on external financing to fund its continued development program. The Company's main sources of funding have been the issuance of equity securities for cash, debt, funds from the government of Quebec with respect to R&D tax credit, from the federal government with respect to R&D tax credits, from SDTC and from the Industrial Research Assistance Program.

### FINANCIAL INSTRUMENTS AND RISK MANAGEMENT

For a detailed description of the financial instruments and risk management associated with the Company and its activities, please refer to the annual consolidated financial statements of June 30, 2019. These identified financial instruments and risks are consistent through the periods.

### OFF-BALANCE SHEET ARRANGEMENTS

As of the date of this MD&A, the Company did not have any off-balance sheet arrangements, except for the commitment disclosed in the annual consolidated financial statements of June 30, 2019.

### OUTSTANDING SHARES

As at October 10, 2019, the Company has:

- 120,995,810 common shares issued and outstanding;
- 3,767,133 stock options outstanding with expiry dates ranging between January 2, 2020 and April 9, 2023 with exercise prices between $0.45 and $1.80. If all the options were exercised, 3,767,133 shares would be issued for cash proceeds of $1,107,710;
- 3,272,778 warrants and Broker Warrants outstanding with expiry date of March 27, 2020 and exercise price between $1.65 and $2.30. If all the warrants were exercised, 3,272,778 shares would be issued for cash proceeds of $7,369,811.

## RISKS AND UNCERTAINTIES

The operations of the Company are speculative due to the high-risk nature of its business, which relates to acquisitions, financing, technology and manufacturing. These risk factors could materially affect the Company's future operating results and could cause actual events to differ materially from those described in forward–looking information relating to the Company.

### MARKET DEVELOPMENT AND SUSTAINED GROWTH

Failure to further develop the Company's key markets and existing geographic markets or to successfully expand its business into new markets could have an adverse impact on sales growth and operating results. The Company's ability to further penetrate its key markets and the existing geographic markets in which it competes, and successfully expand its business into other countries in Europe, South America or elsewhere, is subject to numerous factors, many of which are beyond its control. There can be no assurance that efforts to increase market penetration in the Company's key markets and existing geographic markets will be successful. Failure to achieve these goals may have an adverse effect on the Company's operating results.

### SMALL REVENUE FROM GRAPHENE POWDER DIRECT SALE

To date, the Company has recorded small revenue from its graphene powder direct sale. There can be no assurance that significant losses will not occur in the near future or that the Company will be profitable in the future. The Company's operating expenses and capital expenditures may increase in subsequent years as consultants, personnel and equipment associated with sales and manufacturing of graphene powder. The Company expects to continue to incur losses unless and until such time as it enters into long term and large volume graphene supply agreements and generates sufficient revenues to fund its continuing operations. The development of NanoXplore's large volume graphene production facility will require the commitment of substantial resources to conduct time-consuming development. The ability to sell graphene in commercial quantities is dependent on customers' acceptance and government approvals. There can be no assurance that the Company will generate any revenues or achieve profitability.

### LIQUIDITY CONCERNS AND FUTURE FINANCINGS

The Company is dependent on the beginning of the commercial operation of the graphene products. Any delay in the construction of the graphene plant and the sales of the product could require additional financings. There can be no assurance that the Company will be successful in obtaining the required financing as and when needed. Volatile markets may make it difficult or impossible for the Company to obtain debt financing or equity financing on favorable terms, if at all. Failure to obtain additional financing on a timely basis may cause the Company to postpone or slow down its development plans or reduce or terminate some or all of its activities.

### FOREIGN EXCHANGE

The Company operates internationally and is exposed to foreign exchange risk mainly related to expenses and sales in currencies other than the respective functional currencies of the Company, primarily with respect to the US dollar.

Management has set up a policy that requires the Company to manage its currency risk and imposes strict limits on the maximum exposures that can be entered into.

Sales denominated in US dollars accounted for about 53% of the Company's total sales for the year ended June 30, 2019. Consequently, the Canadian dollar trends in relation to the US dollar add an element of risk and uncertainty for the Company. These risks are partially offset by the raw material purchases denominated in US dollars. The company's policy is not to use derivative financial instruments for trading or speculative purposes but only for hedging some risk related to the US dollar. The Company set up credit facilities allowing it to enter into forward foreign or option exchange contract transactions. This amount partially covers the Company's potential requirements over the next 24 months. The Vompany will proactively monitor the need to use this facility based on market conditions

### LICENCES AND PERMITS, LAWS AND REGULATIONS

Large production volume of graphene requires permits and approvals from various government authorities, and are subject to extensive federal, provincial, and local laws and regulations governing development, production, exports, taxes, labour standards, occupational health and safety, and other matters. Such laws and regulations are subject to change, can become more stringent and compliance can therefore become more costly. In addition, the Company may be required to compensate those suffering loss or damage by reason of its activities. There can be no guarantee that the Company will be able to maintain or obtain all necessary licences, permits and approvals that may be required to further scale up the graphene production facility.

### DEPENDENCE ON MANAGEMENT AND KEY PERSONNEL

The Company is dependent on the services of key executives, including a small number of highly skilled and experienced executives and personnel. The Company's development to date has largely depended, and in the future will continue to depend, on the efforts of key management and other key personnel to develop its projects. Loss of any of these people, particularly to competitors, in the short term, could have a material adverse impact upon the Company current business.

### HEALTH AND SAFETY AND ENVIRONMENTAL

Currently, there is no regulation regarding health and safety and the environmental impact of graphene. These regulations may come into effect in the future, such as regulations governing environmental protection and employee health and safety. Environmental legislation is evolving in a manner that is creating stricter standards, while enforcement, fines and penalties for non-compliance are also increasingly stringent. The cost of compliance with changes in governmental regulations has the potential to reduce the profitability of operations. Further, any failure by the Company to comply fully with all applicable laws and regulations could have significant adverse effects on the Company, including the suspension or cessation of operations.

### UNINSURED RISKS

The Company maintains insurance to cover normal business risks. In the course of manufacturing businesses, certain risks and, in particular, unexpected or unusual catastrophic events including explosions and fire may occur. It is not always possible to fully insure against such risks as a result of high premiums or other reasons. Should such liabilities arise, they could reduce or eliminate any future profitability and result in increasing costs and a decline in the value of the common shares of the Company.

### COMPETITION

The Company competes with other graphene manufacturing companies that have interesting strong technology and have been in the market longer than the Company and have stronger financial backing. Such competition may result in the Company being unable to acquire large volume customers, recruit or retain qualified employees or acquire the capital necessary to fund its operations and scale up the production of graphene. The Company's inability to compete with other graphene companies would have a material adverse effect on the Company's results of operation and business.

### QUALIFIED EMPLOYEES

Recruiting and retaining qualified personnel is critical to the Company's success. Graphene is a newly discovered material and finding skilled scientists and a sales team familiar to the subject is difficult. As the Company grows further, the need for skilled labour will increase. The number of persons skilled in the high-tech manufacturing business is limited and competition for this workforce is intense. This may adversely affect the business of NanoXplore if the Company cannot recruit and retain qualified personnel as and when required.

### SHARE PRICE FLUCTUATIONS

The market price of securities of many companies, particularly development stage companies, experience wide fluctuations in price that are not necessarily related to the operating performance, underlying asset values or prospects of such companies. There can be no assurance that fluctuations in the Company's share price will not occur.

### CONFLICTS OF INTEREST

Certain of the Company' directors and officers serve or may agree to serve as directors or officers of other companies and, to the extent that such other companies may participate in ventures in which the Company may participate, the directors of the Company may have a conflict of interest in negotiating and concluding terms respecting such participation.

### ENERGY COST

Energy cost is a significant part of the expenses involved in the manufacturing business. The Company profit margin will significantly be impacted by the energy cost. In the case of increase in the electricity cost, The Company's gross profit will reduce and this may adversely affect the Company's business.

### LITIGATION

The Company has entered into legally binding agreements with various third parties on a Non-Disclosure, consulting and partnership basis. The interpretation of the rights and obligations that arise from such agreements is open to interpretation and the Company may disagree with the position taken by the various other parties resulting in a dispute that could potentially initiate litigation and cause the Company to incur legal costs in the future. Given the speculative and unpredictable nature of litigation, the outcome of any such disputes could have a material adverse effect on the Company's business.

## RELATED PARTY TRANSACTIONS

For a detailed description of all related party transactions, please refer to the Note 17 “Related party transactions” in the consolidated financial statements for the years ended June 30, 2019 and 2018.

## CRITICAL ACCOUNTING JUDGMENTS AND ESTIMATES

For a detailed description of the critical accounting judgments and estimates associated with the Company and its activities, please refer to the section "Significant management estimations and judgments in applying accounting policies" in the note 2 in the audited consolidated financial statements for the years ended June 30, 2019 and 2018. The Company was not required to make significant judgments, estimates and assumptions in areas other than those mentioned in the audited consolidated financial statements for the years ended June 30, 2019 and 2018.

## FUTURE CHANGES IN ACCOUNTING POLICIES

The standards and amendments to existing standards have been published, and their adoption is mandatory for future accounting periods. Refer to the note 3 in the consolidated financial statements for the years ended June 30, 2019 and 2018 for the details of these standards and amendments.

## CONTROLS AND PROCEDURES

The information provided in this MD&A, including the consolidated financial statements, is the responsibility of management. In the preparation of these statements, estimates are sometimes necessary to make a determination of future values for certain assets or liabilities. Management believes such estimates have been based on careful judgments and have been properly reflected in the accompanying financial statements.

The Board of Directors oversees management's responsibility for financial reporting and internal control systems. This Board of directors discuss quarterly with management and annually with the independent auditors to review the scope and results of the annual audit and to review the year-to-date financial statements and related financial reporting and internal control matters before the financial statements are approved by the Board of Directors and submitted to the shareholders.

In contrast to the certificate required under National Instrument 52-109 Certification of Disclosure in Issuers' Annual and Interim Filings ("NI 52-109"), the Venture Issuer Basic Certificate does not include representations relating to the establishment and maintenance of disclosure controls and procedures ("DC&P") and internal control over financial reporting ("ICFR"), as defined in NI 52-109. In particular, the certifying officers filing this certificate are not making any representations relating to the establishment and maintenance of:

- controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the Company in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and
- a process to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the Company's GAAP.

The Company's certifying officers are responsible for ensuring that processes are in place to provide them with sufficient knowledge to support the representations they are making in this certificate. Investors should be aware that the design and implementation of such processes by those responsible for a venture issuer are subject to cost limitation. DC&P and ICFR as defined in NI 52-109 may result in additional risks to the quality, reliability, transparency and timeliness of interim and annual filings and other reports provided under securities legislation.

The Board of Directors has approved the consolidated financial statements.