



5N PLUS

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**MANAGEMENT  
REPORT**

**QUARTER  
ENDED  
JUNE 30,  
2017**

# Management's Discussion and Analysis

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This Management's Discussion and Analysis ("MD&A") of the financial condition and results of operations is intended to assist readers in understanding 5N Plus Inc. (the "Company", the "Group" or "5N Plus"), its business environment, strategies, performance and risk factors. This MD&A should be read in conjunction with the unaudited condensed interim consolidated financial statements of Q2 2017 and the audited consolidated financial statements and the accompanying notes for the year ended December 31, 2016. This MD&A has been prepared in accordance with the requirements of the Canadian Securities Administrators.

Information contained herein includes any significant developments to August 1, 2017, the date on which the MD&A was approved by the Company's board of directors. Unless otherwise indicated, the terms "we", "us", "our" and "the group" as used herein refer to the Company together with its subsidiaries.

"Q2 2017" and "Q2 2016" refer to the three-month periods ended June 30, 2017 and 2016 respectively, and "YTD 2017" and "YTD 2016" refer to the six-month periods ended June 30, 2017 and 2016 respectively. All amounts in this MD&A are expressed in U.S. dollars, and all amounts in the tables are in thousands of U.S. dollars, unless otherwise indicated. All quarterly information disclosed in this MD&A is based on unaudited figures.

## **Non-IFRS Measures**

This MD&A also includes certain figures that are not performance measures consistent with IFRS. These measures are defined at the end of this MD&A under the heading Non-IFRS Measures.

## **Notice Regarding Forward-Looking Statements**

Certain statements in this MD&A may be forward-looking within the meaning of applicable securities laws. Forward-looking information and statements are based on the best estimates available to the Company at the time and involve known and unknown risks, uncertainties or other factors that may cause the Company's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. A description of the risks affecting the Company's business and activities appears under the heading "Risk and Uncertainties" of 5N Plus' 2016 MD&A dated February 21, 2017 and notes 11 and 12 of the unaudited condensed interim consolidated financial statements for the three and six-month periods ended June 30, 2017 and 2016, available on Sedar at [www.sedar.com](http://www.sedar.com). Forward-looking statements can generally be identified by the use of terms such as "may", "should", "would", "believe", "expect", the negative of these terms, variations of them or any similar terms. No assurance can be given that any events anticipated by the forward-looking information in this MD&A will transpire or occur, or if any of them do so, what benefits that 5N Plus will derive therefrom. In particular, no assurance can be given as to the future financial performance of 5N Plus. The forward-looking information contained in this MD&A is made as of the date hereof and the Company has no obligation to publicly update such forward-looking information to reflect new information, subsequent or otherwise, unless required by applicable securities laws. The reader is warned against placing undue reliance on these forward-looking statements.

# Management's Discussion and Analysis

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## Overview

5N Plus is the leading producer of specialty metal and chemical products. Fully integrated with closed-loop recycling facilities, the Company is headquartered in Montreal, Quebec, Canada and operates manufacturing facilities and sales offices in several locations in Europe, the Americas and Asia. 5N Plus deploys a range of proprietary and proven technologies to manufacture products which are used in a number of advanced pharmaceutical, electronic and industrial applications. Typical products include purified metals such as bismuth, gallium, germanium, indium, selenium and tellurium, inorganic chemicals based on such metals and compound semiconductor wafers. Many of these are critical precursors and key enablers in markets such as solar, light-emitting diodes and eco-friendly materials.

## Reporting Segments

The Company has two reportable segments, namely Electronic Materials and Eco-Friendly Materials. Corresponding operations and activities are managed accordingly by the Company's key decision makers. Segmented operating and financial information, labelled key performance indicators, are available and used to manage these business segments, review performance and allocate resources. Financial performance of any given segment is evaluated primarily in terms of revenues and Adjusted EBITDA<sup>1</sup> which is reconciled to consolidated numbers by taking into account corporate income and expenses.

The Electronic Materials segment operates in North America, Europe and Asia. The Electronic Materials segment manufactures and sells refined metals, compounds and alloys which are primarily used in a number of electronic applications. Typical end-markets include photovoltaics (terrestrial and spatial solar energy), light emitting diodes (LED), displays, high-frequency electronics, medical imaging and thermoelectrics. Main products are associated with the following metals: cadmium, gallium, germanium, indium and tellurium. These are sold either in elemental or alloyed form as well as in the form of chemicals, compounds and wafers. Revenues and earnings associated with recycling services and activities provided to customers of the Electronic Materials segment are also included in the Electronic Materials segment and management of such activities is the responsibility of the Electronic Materials executive team.

The Eco-Friendly Materials segment is so labelled because it is mainly associated with bismuth, one of the very few heavy metals which has no detrimental effect on either human health or in the environment. As a result, bismuth is being increasingly used in a number of applications as a replacement for more harmful metals and chemicals. The Eco-Friendly Materials segment operates in North America, Europe and Asia. The Eco-Friendly Materials segment manufactures and sells refined bismuth and bismuth chemicals, low melting point alloys as well as refined selenium and selenium chemicals. These are used in the pharmaceutical and animal-feed industry as well as in a number of industrial applications including coatings, pigments, metallurgical alloys and electronics. Management of such activities is the responsibility of the Eco-Friendly Materials executive team.

Corporate expenses associated with the head office and unallocated selling, general and administrative expenses (SG&A) together with financial expenses (revenues) have been regrouped under the heading Corporate.

## Vision and Strategy

As a leading global material technology company with employees and assets throughout the world, we are determined to enable and empower our people in a manner which inspires them to perform collectively at their best and optimize resource utilization to deliver competitive financial returns.

The Company unveiled its Strategic Plan 5N21 ("5N21") designed to enhance profitability while reducing earnings volatility on September 12, 2016. 5N21 focuses on three major pillars:

1. Extracting more value from core businesses and global assets;
2. Optimizing balance of contribution from upstream and downstream activities; and
3. Delivering quality growth from both existing and future M&A opportunities.

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<sup>1</sup> See Non-IFRS Measures

# Management's Discussion and Analysis

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## Highlights of Q2 2017 – 5N21 beginning to show its impact: margin expansion, profitability growth and further net-debt reduction.

Over the past quarter, 5N Plus has continued to grow the Company's profitability and further strengthen its already sound balance sheet. Given the introduction of the Strategic Plan 5N21 last summer and immediate implementation thereafter, these results demonstrate the initial impact of the plan, particularly with respect to the expansion of margins and delivery of consistent and competitive returns on capital employed (ROCE)<sup>1</sup>, independent of metal notations. The following highlights the past quarter:

- Adjusted EBITDA<sup>1</sup> and EBITDA<sup>1</sup> for the second quarter of 2017 reached \$6.8 million and \$6.3 million compared to \$4.7 million and \$5.4 million during the same quarter of 2016. The Adjusted EBITDA and EBITDA reflect profitability growth driven by enhanced gross margins<sup>1</sup> surpassing previous quarter and the same quarter last year along with sustainable market demand for most products and overall performance of operating activities.
- Net earnings for the second quarter of 2017 reached \$3.4 million or \$0.04 per share compared to \$0.1 million for the same period last year, year-to date earnings per share reaching \$0.09 compared to a loss of \$0.02 per share for the same period of 2016.
- Revenue for Q2 2017 reached \$56.2 million compared to \$57.4 million for Q2 2016 impacted by selectivity based on enlarging the value-added portion as a percentage of revenue versus pass-through portion resulting in gross margin expansion reaching 28.5% in Q2 2017 compared to 22.6% in Q2 2016, and year-to date gross margin reaching 25.7% compared to 20.9% for the same period of last year.
- While the price of the basket of metals utilized as consumable in the Company's products remained near low levels in the recent history; Return on Capital Employed improved to 12% during the first half of 2017, the highest since the acquisition of MCP and consistent with the Company's plan to deliver competitive returns independent of metal notations.
- As per Management's guidance in the last earnings call, in Q2 2017, Eco-Friendly Materials reconciled the earning gap in Q1 2017 versus Q1 2016 and went further to register first-half profitability ahead of the 2016 performance for the same period with Adjusted EBITDA for this segment in the first semester of 2017 reaching \$8.0 million as compared to \$7.6 million for the same period last year.
- Net debt<sup>1</sup> stood at \$14.1 million as at June 30, 2017 lower by \$4.9 million when compared to December 31, 2016, with liquidity maintained at a very high level and investments in line with the 5N21 strategic plan.
- As at June 30, 2017, the backlog<sup>1</sup> reached a level of 135 days of outstanding sales, higher than the previous quarter. Bookings<sup>1</sup> in Q2 2017 reached 87 days compared to 97 days in Q1 2017 and 86 days in Q2 2016.
- The Company reaffirmed its guidance for 2017 as per 5N21.

During the quarter, the Company continued to selectively position its business segments with emphasis on more value-added downstream markets and expansion into upstream activities with the aim of improving competitive access to metals and materials needed for the Company's downstream businesses. The Company delivered the best quarterly percentage gross margin performances, and highest level of return on capital employed since 2010. In addition, the Company's balance sheet further strengthened as net debt reduced by an additional \$4.9 million compared to December 2016.

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<sup>1</sup> See Non-IFRS Measures

## Management's Discussion and Analysis

During the quarter and throughout the first half of the year, business segments Eco-Friendly and Electronic Materials experienced healthy demand for their products. Moreover, the consolidation of operations in Wellingborough (UK) and Madison (USA) to other operating facilities within the Group continued to advance and should reach conclusion later this year.

To provide more visibility with how the 5N21 strategic plan's execution is progressing, the Company has updated its website with a progress report under [www.5nplus.com](http://www.5nplus.com). This publication provides a view of the Company's strategic plan and a progress measurement against each of the three pillars of the plan.

### Summary of Results

	Q2 2017	Q2 2016	YTD 2017	YTD 2016
	\$	\$	\$	\$
Revenue	56,229	57,435	117,099	121,303
Adjusted operating expenses <sup>1*</sup>	(49,390)	(52,721)	(104,188)	(112,339)
Adjusted EBITDA <sup>1</sup>	6,839	4,714	12,911	8,964
Impairment of inventory	-	-	-	-
Gain on disposal of property, plant and equipment	-	-	390	-
Litigation and restructuring income (costs)	-	-	3,368	(1,030)
Change in fair value of debenture conversion option	(316)	57	(294)	(252)
Foreign exchange and derivative (loss) gain	(182)	587	(359)	560
EBITDA <sup>1</sup>	6,341	5,358	16,016	8,242
Interest on long-term debt, imputed interest and other interest expense	1,424	1,865	3,229	4,564
Depreciation and amortization	1,974	2,520	4,017	4,926
Earnings (loss) before income taxes	2,943	973	8,770	(1,248)
Income tax (recovery) expense				
Current	992	347	1,310	1,046
Deferred	(1,464)	539	(108)	(472)
	(472)	886	1,202	574
Net earnings (loss)	3,415	87	7,568	(1,822)
Basic earnings (loss) per share	\$0.04	-	\$0.09	(\$0.02)
Diluted earnings (loss) per share	\$0.04	-	\$0.09	(\$0.02)

<sup>1</sup>Excluding litigation and restructuring (income) costs, gain on disposal of property, plant and equipment and depreciation and amortization.

### Revenue by Segment and Gross Margin

	Q2 2017	Q2 2016	Change	YTD 2017	YTD 2016	Change
	\$	\$		\$	\$	
Electronic Materials	18,566	19,706	(6%)	37,905	39,274	(3%)
Eco-Friendly Materials	37,663	37,729	-	79,194	82,029	(3%)
<b>Total revenue</b>	<b>56,229</b>	<b>57,435</b>	<b>(2%)</b>	<b>117,099</b>	<b>121,303</b>	<b>(3%)</b>
Cost of sales	(42,049)	(46,913)	(10%)	(90,809)	(100,652)	(10%)
Depreciation on property, plant and equipment (PPE)	1,867	2,455	(24%)	3,840	4,701	(18%)
<b>Gross margin<sup>1</sup></b>	<b>16,047</b>	<b>12,977</b>	<b>24%</b>	<b>30,130</b>	<b>25,352</b>	<b>19%</b>
<b>Gross margin percentage<sup>1</sup></b>	<b>28.5%</b>	<b>22.6%</b>		<b>25.7%</b>	<b>20.9%</b>	

During Q2 2017 and YTD 2017, revenue decreased by 2% and 3% compared to the corresponding periods of 2016. Although, sales volumes were lower in 2017, gross margin<sup>1</sup> has improved reflecting the moderate price stability in metals supported by our selective approach focused on better margin products. The gross margin reached 28.5% in Q2 2017 compared to 22.6% in Q2 2016, tracking an average gross margin of 25.7% after 6 months compared to 20.9% for the same period of 2016.

<sup>1</sup> See Non-IFRS Measures

# Management's Discussion and Analysis

## Operating earnings, EBITDA and Adjusted EBITDA

	Q2 2017	Q2 2016	Change	YTD 2017	YTD 2016	Change
	\$	\$		\$	\$	
Electronic Materials	6,668	4,980	34%	13,628	8,400	62%
Eco-Friendly Materials	5,591	3,735	50%	8,003	7,563	6%
Corporate	(5,420)	(4,001)	35%	(8,720)	(6,999)	25%
<b>Adjusted EBITDA<sup>1</sup></b>	<b>6,839</b>	<b>4,714</b>	<b>45%</b>	<b>12,911</b>	<b>8,964</b>	<b>44%</b>
<b>EBITDA<sup>1</sup></b>	<b>6,341</b>	<b>5,358</b>	<b>18%</b>	<b>16,016</b>	<b>8,242</b>	<b>94%</b>
<b>Operating earnings</b>	<b>4,865</b>	<b>2,194</b>	<b>122%</b>	<b>12,652</b>	<b>3,008</b>	<b>321%</b>

In Q2 2017, operating earnings rose by \$2.7 million to \$4.9 million compared to \$2.2 million in Q2 2016, driven mainly by better realized gross margins. In YTD 2017, operating earnings increased by \$9.6 million and reached \$12.7 million compared to \$3.0 million for the corresponding period last year, improved by better realized gross margins, the favorable impact from litigation and restructuring income, and a gain on disposal of property.

In Q2 2017, EBITDA<sup>1</sup> reached \$6.3 million compared to \$5.4 million in Q2 2016. For Q2 2017, the Company's EBITDA was positively impacted by better realized gross margins, moderate price stability for most metals, and sustainable demand for its products.

In Q2 2017, Adjusted EBITDA<sup>1</sup> rose by \$2.1 million to \$6.8 million compared to \$4.7 million in Q2 2016, driven by a better sales mix and associated realized margins. Adjusted EBITDA for the Electronic Materials segment increased by \$1.7 million to \$6.7 million representing an Adjusted EBITDA margin<sup>1</sup> of 36% compared to 25% in Q2 2016. Adjusted EBITDA for the Eco-Friendly Materials segment increased by \$1.9 million to \$5.6 million compared to \$3.7 million in Q2 2016, representing an Adjusted EBITDA margin of 15% compared to 10% in Q2 2016. The Adjusted EBITDA under Corporate for Q2 2017 was impacted by higher long-term incentive plan provisions of \$1.8 million compared to the same period of last year following the important increase of the Company's share price during the quarter.

For the same reasons mentioned above, EBITDA for YTD 2017 increased by \$7.8 million to \$16.0 million compared to \$8.2 million for the corresponding period last year. On a year-to-date basis, Adjusted EBITDA for the Electronic Materials segment increased by \$5.2 million to \$13.6 million representing an Adjusted EBITDA margin of 36% compared to 21% for the prior year. Adjusted EBITDA for the Eco-Friendly Materials segment increased by \$0.4 million to \$8.0 million, representing an Adjusted EBITDA margin of 10% slightly higher to the equivalent prior year period. The Adjusted EBITDA under Corporate for YTD 2017 decreased compared to YTD 2016 due to greater short and long-term incentive plan provisions recorded this current period.

## Net Earnings (Loss) and Adjusted Net Earnings (Loss)

	Q2 2017	Q2 2016	YTD 2017	YTD 2016
	\$	\$	\$	\$
Net earnings (loss)	3,415	87	7,568	(1,822)
Basic earnings (loss) per share	\$0.04	-	\$0.09	(\$0.02)
Reconciling items:				
Litigation and restructuring (income) costs	-	-	(3,368)	1,030
Gain on disposal of property, plant and equipment	-	-	(390)	-
Change in fair value of debenture conversion option	316	(57)	294	252
Income taxes on taxable items above	(84)	15	1,145	(68)
<b>Adjusted net earnings (loss)<sup>1</sup></b>	<b>3,647</b>	<b>45</b>	<b>5,249</b>	<b>(608)</b>
<b>Basic adjusted net earnings (loss) per share<sup>1</sup></b>	<b>\$0.04</b>	<b>-</b>	<b>\$0.06</b>	<b>(\$0.01)</b>

<sup>1</sup> See Non-IFRS Measures

## Management's Discussion and Analysis

Net earnings reached \$3.4 million in Q2 2017 compared to \$0.1 million in Q2 2016. In Q2 2017, Adjusted net earnings<sup>1</sup> increased by \$3.6 million and reached \$3.6 million compared to \$nil million in Q2 2016. Excluding the income tax expense, the only item reconciling the Adjusted net earnings in the quarter is the change in fair value of the debenture conversion option following the Company's important share price appreciation in Q2 2017.

Net earnings reached \$7.6 million in YTD 2017 compared to a net loss of \$1.8 million in YTD 2016. In YTD 2017, Adjusted net earnings increased by \$5.9 million and reached \$5.2 million compared to Adjusted net loss<sup>1</sup> of \$0.6 million in YTD 2016. Excluding the income tax expense, the main items reconciling the Adjusted net earnings for YTD 2017 were an income resulting from an amendment to optimize commercial agreements mitigated by cost related to the termination of a non-core activity as well as a gain on disposal on a redundant asset (property).

### Bookings and Backlog

	BACKLOG <sup>1</sup>			BOOKINGS <sup>1</sup>		
	Q2 2017	Q1 2017	Q2 2016	Q2 2017	Q1 2017	Q2 2016
	\$	\$	\$	\$	\$	\$
Electronic Materials	44,577	44,653	49,790	18,490	28,575	21,015
Eco-Friendly Materials	38,615	40,945	48,825	35,333	36,099	33,362
<b>Total</b>	<b>83,192</b>	<b>85,598</b>	<b>98,615</b>	<b>53,823</b>	<b>64,674</b>	<b>54,377</b>

(number of days based on annualized revenues) *	BACKLOG <sup>1</sup>			BOOKINGS <sup>1</sup>		
	Q2 2017	Q1 2017	Q2 2016	Q2 2017	Q1 2017	Q2 2016
Electronic Materials	219	211	231	91	135	97
Eco-Friendly Materials	94	90	118	86	79	81
Weighted average	135	128	157	87	97	86

\*Bookings and backlog are also presented in number of days to normalize the impact of commodity prices.

#### Q2 2017 vs Q1 2017

Backlog<sup>1</sup> reached as at June 30, 2017 a level of 135 days of sales outstanding, representing an increase of 7 days compared to the previous quarter.

Backlog as at June 30, 2017 for the Electronic Materials segment represented 219 days of sales outstanding, an increase of 8 days, or 4%, over the backlog ended March 31, 2017. The backlog for the Eco-Friendly Materials segment represented 94 days of annualized segment revenues, an increase of 4 days or 4%, over the backlog ended March 31, 2017.

Bookings<sup>1</sup> for the Electronic Materials segment decreased by 44 days, from 135 days in Q1 2017 to 91 days in Q2 2017, an extraordinary level reached in Q1 2017 when compared to historical figures including Q2 2016. Bookings for the Eco-Friendly Materials segment increased by 7 days, from 79 days in Q1 2017 to 86 days in Q2 2017.

#### Q2 2017 vs Q2 2016

Backlog as at June 30, 2017 for the Electronic Materials segment decreased by 12 days and by 24 days for the Eco-Friendly Materials segment compared to June 30, 2016, resulting from our selective positioning aimed at balancing market share against margin management, as well as recent announcement from a client to retrofit its operations.

Bookings decreased by 6 days for the Electronic Materials segment and increased by 5 days for the Eco-Friendly Materials segment compared to the previous year quarter.

<sup>1</sup> See Non-IFRS Measures

# Management's Discussion and Analysis

## Expenses

	Q2 2017	Q2 2016	YTD 2017	YTD 2016
	\$	\$	\$	\$
Depreciation and amortization	1,974	2,520	4,017	4,926
SG&A	6,434	6,773	13,473	13,151
Litigation and restructuring (income) costs	-	-	(3,368)	1,030
Financial expenses	1,922	1,221	3,882	4,256
Income tax (recovery) expense	(472)	886	1,202	574
<b>Total expenses</b>	<b>9,858</b>	<b>11,400</b>	<b>19,206</b>	<b>23,937</b>

### Depreciation and Amortization

Depreciation and amortization expenses in Q2 2017 and YTD 2017 amounted to \$2.0 million and \$4.0 million respectively, compared to \$2.5 million and \$4.9 million for the same periods of 2016, impacted by the accelerated depreciation recorded in Q3 2016 following the Company's decision to optimize its footprint.

### SG&A

For Q2 2017 and YTD 2017, SG&A expenses were \$6.4 million and \$13.5 million respectively, compared to \$6.8 million and \$13.2 million for the same periods of 2016. On a year-to-date basis, the variation is mostly explained by higher wages and other expenses mitigated by favourable exchange rates across most local currency denominated expenses.

### Litigation and Restructuring (Income) Costs

In Q2 2017, the Company did not recognize any litigation and restructuring costs, while for YTD 2017, the Company recognized in Q1 2017 an income resulting from contract amendments for securing higher margins in the short term versus higher market share in the downstream business mitigated by costs related to the termination of non-core commercial activities in the upstream business activities. In Q1 2016, the Company recorded litigation and restructuring costs as a provision of \$1.0 million following initiatives to reduce its operating expenses and renegotiate unfavourable purchase contracts.

### Financial Expenses and Revenues

Financial expenses for Q2 2017 amounted to \$1.9 million compared to \$1.2 million for the same period last year. The increase in financial expenses of \$0.7 million is mainly due to the negative impact of foreign exchange and derivatives combined with a charge related to the fair value of the debenture conversion option partially mitigated by lower imputed interest when compared to last year.

Financial expenses for YTD 2017 amounted to \$3.9 million compared to \$4.3 million for the same period last year. The decrease in financial expenses of \$0.4 million is mainly due to lower imputed interest and other interest expenses impacted by unfavourable foreign exchange when compared to last year.

### Income Taxes

The Company reported net earnings before income taxes of \$2.9 million in Q2 2017 and \$8.8 million for YTD 2017. Income tax recovery for Q2 2017 was \$0.5 million and income tax expense was \$1.2 million for YTD 2017 compared to an income tax expense of \$0.9 million and \$0.6 million for the same periods last year. These amounts were unfavorably impacted since the Company does not record the benefit of the tax losses incurred during those periods in certain jurisdictions.



# Management's Discussion and Analysis

## Liquidity and Capital Resources

	Q2 2017	Q2 2016	YTD 2017	YTD 2016
	\$	\$	\$	\$
Funds from operations <sup>1</sup>	7,945	4,521	16,675	6,992
Net changes in non-cash working capital items	1,669	(3,148)	(7,293)	3,866
Operating activities	9,614	1,373	9,382	10,858
Investing activities	(2,525)	(1,539)	(3,119)	(3,543)
Financing activities	95	661	(389)	(937)
Effect of foreign exchange rate changes on cash and cash equivalents	168	(121)	200	31
<b>Net increase in cash and cash equivalents</b>	<b>7,352</b>	<b>374</b>	<b>6,074</b>	<b>6,409</b>

Cash provided by operating activities amounted to \$9.6 million for Q2 2017 compared to \$1.4 million for the corresponding period in 2016. The increase is mainly due from the better management of the non-cash working capital combined with the increase in Adjusted EBITDA<sup>1</sup>. For YTD 2017, cash provided by operating activities amounted to \$9.4 million compared to \$10.9 million for the corresponding period in 2016. The decrease is from a negative change in non-cash working capital mitigated by an important increase in Adjusted EBITDA. The negative change of non-cash working capital resulted from higher trade accounts receivable of \$3.4 million and lower accounts payable of \$5.7 million but was mitigated by a reduction of \$2.0 million in inventory.

Cash used in investing activities totaled \$2.5 million in Q2 2017 and \$3.1 million for YTD 2017 compared to \$1.5 million and \$3.5 million for the corresponding periods of 2016 respectively. These increases are mainly explained by higher acquisitions of property, plant and equipment and intangible assets, while on a year-to-date basis, the increase was mitigated by the proceeds from disposal of a redundant asset.

Cash provided by financing activities amounted to \$0.1 million in Q2 2017, compared to \$0.7 million in Q2 2016. The decrease when compared to 2016 is mainly associated with the timing of contributions expected from a product development partnership program, mitigated by cash provided in 2017 from common share issuances net of activities from the common share repurchase program. For YTD 2017, cash used in financing activities amounted to \$0.4 million compared to \$0.9 million. The decrease is associated with a net reduction in the amounts drawn under the revolving facility following a better management of non-cash working capital, net of the impact of the common share repurchase program, started in October 2016. The Company had no drawdown under its credit facility at the end of Q2 2017 nor at the end of the previous fiscal year.

## Working Capital

	As at June 30, 2017	As at December 31, 2016
	\$	\$
Inventories	78,290	80,309
Other current assets	74,766	63,750
Current liabilities	(64,589)	(66,128)
Working capital <sup>1</sup>	88,467	77,931
Working capital current ratio <sup>1</sup>	2.37	2.18

The increase in working capital<sup>1</sup> compared to December 31, 2016 was mainly due to higher accounts receivable combined with lower accounts payable due to payments of short term obligations while the Company continued its effort to ensure a better alignment between material usage and purchase aimed at reducing inventory.

<sup>1</sup> See Non-IFRS Measures

# Management's Discussion and Analysis

## Net Debt

	As at June 30, 2017	As at December 31, 2016
	\$	\$
Bank indebtedness	-	-
Long-term debt including current portion	263	325
Convertible debentures	46,027	43,157
Cross-currency swap	(1,821)	(189)
<b>Total Debt</b>	<b>44,469</b>	<b>43,293</b>
Cash and cash equivalents	(30,375)	(24,301)
<b>Net Debt<sup>1</sup></b>	<b>14,094</b>	<b>18,992</b>

Total debt, including the cross-currency swap, increased by \$1.2 million to \$44.5 million as at June 30, 2017, compared to \$43.3 million as at December 31, 2016.

Net debt<sup>1</sup>, after considering cash and cash equivalents, decreased by \$4.9 million, from \$19.0 million as at December 31, 2016 to \$14.1 million as at June 30, 2017.

## Funds from Operations

	Q2 2017	Q2 2016	YTD 2017	YTD 2016
	\$	\$	\$	\$
<b>Funds from operations<sup>1</sup></b>	<b>7,945</b>	<b>4,521</b>	<b>16,675</b>	<b>6,992</b>
Net acquisition of PPE and intangible assets	(2,525)	(1,539)	(4,264)	(3,443)
Working capital changes	1,669	(3,148)	(7,293)	3,866
Proceeds on disposal of property, plant and equipment	-	-	1,145	-
Common shares repurchased	(170)	-	(654)	-
Issuance of common shares	339	-	339	-
Others	(507)	249	(1,050)	(19)
	<b>(1,194)</b>	<b>(4,438)</b>	<b>(11,777)</b>	<b>404</b>
<b>Total movement in net debt<sup>1</sup></b>	<b>6,751</b>	<b>83</b>	<b>4,898</b>	<b>7,396</b>
Net debt <sup>1</sup> , beginning of period	(20,845)	(27,549)	(18,992)	(34,862)
<b>Net debt<sup>1</sup>, end of period</b>	<b>(14,094)</b>	<b>(27,466)</b>	<b>(14,094)</b>	<b>(27,466)</b>

Funds from operations<sup>1</sup> increased by \$3.4 million to \$7.9 million in Q2 2017 compared to \$4.5 million for the corresponding period of 2016. The fluctuation was further increased by the positive variance from working capital changes mitigated by higher acquisitions of PPE and intangible assets compared to the same period last year. For YTD 2017, funds from operations<sup>1</sup> increased by \$9.7 million to \$16.7 million compared to \$7.0 million for YTD 2016. The increase was reduced by the negative variance from working capital changes and by higher acquisitions of PPE and intangible assets compared to the same period last year.

## Share Information

	As at August 1, 2017	As at June 30, 2017
Issued and outstanding shares	83,546,041	83,546,041
Stock options potentially issuable	1,834,672	1,834,672
Convertible debentures potentially issuable	9,777,777	9,777,777

On February 21, 2017, the Toronto Stock Exchange approved an amendment to the Company's normal course issuer bid implemented on October 11, 2016. Under this normal course issuer bid amendment, the Company has the right to purchase for cancellation, from October 11, 2016 to October 10, 2017, a maximum of 2,100,000 (previously 600,000) common shares. For the six-month period ended June 30, 2017, the Company repurchased and cancelled 475,016 common shares at an average price of \$1.38 for a total amount of \$0.7 million that has been applied against the equity.

<sup>1</sup> See Non-IFRS Measures

# Management's Discussion and Analysis

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## Off-Balance Sheet Arrangements

The Company has certain off-balance sheet arrangements, consisting of leasing certain premises and equipment under the terms of operating leases and contractual obligations in the normal course of business.

The Company is exposed to currency risk on sales in Euro and other currencies and therefore periodically enters into foreign currency forward contracts to protect itself against currency fluctuation. The reader will find more details related to these contracts in Notes 16 and 24 of the audited consolidated financial statements for the year ended December 31, 2016.

## Commitments

As at June 30, 2017, in the normal course of business, the Company contracted letters of credit for an amount of up to \$0.4 million (\$0.7 million as at December 31, 2016).

## Contingencies

In the normal course of operations, the Company is exposed to events that could give rise to contingent liabilities or assets. As at the date of issue of the consolidated financial statements, the Company was not aware of any significant events that would have a material effect on its consolidated financial statements.

## Governance

As required by Multilateral Instrument 52-109 of the Canadian Securities Administrators («MI 52-109»), 5N Plus has filed certificates signed by the Chief Executive Officer and the Chief Financial Officer that, among other things, attest to the design of the disclosure controls and procedures and the design and effectiveness of internal controls over financial reporting.

## Disclosure Controls and Procedures

The Chief Executive Officer and the Chief Financial Officer have designed disclosure controls and procedures, or have caused them to be designed under their supervision, in order to provide reasonable assurance that:

- material information relating to the Company has been made known to them; and
- information required to be disclosed in the Company's filings is recorded, processed, summarized and reported within the time periods specified in securities legislation.

An evaluation was carried out, under the supervision of the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the Company's disclosure controls and procedures. Based on this evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that the disclosure controls and procedures are effective.

## Internal Control over Financial Reporting

The Chief Executive Officer and the Chief Financial Officer have also designed internal controls over financial reporting (ICFR), or have caused them to be designed under their supervision, in order to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS.

Based on their evaluation carried out to assess the effectiveness of the Company's ICFR, the Chief Executive Officer and the Chief Financial Officer have concluded that the ICFR were designed and operated effectively using the Internal Control – Integrated Framework (2013 Framework) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO 2013 Framework").

## Changes in Internal Control over Financial Reporting

No changes were made to our ICFR during the first semester ended June 30, 2017 that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

# Management's Discussion and Analysis

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## Accounting Policies and Changes

The Company established its accounting policies and methods used in the preparation of its audited consolidated financial statements for the fiscal year 2016 in accordance with IFRS. The Company's significant accounting policies are described in Note 2 of the audited consolidated financial statements for the year ended December 31, 2016. The key assumptions and basis for estimates that management has made under IFRS, and their impact on the amounts reported in the unaudited condensed interim consolidated financial statements and notes of Q2 2017, remain substantially unchanged from those described in the Company's audited consolidated financial statements for the fiscal year ended December 31, 2016.

### Future Changes in Accounting Policies

The following standards have been issued but are not yet effective:

In May 2014, the IASB issued IFRS 15, "Revenues from Contracts with Customers", to specify how and when to recognize revenue as well as requiring the provision of more information and relevant disclosure. IFRS 15 supersedes IAS 18, "Revenue", IAS 11, "Construction Contracts", and other revenue-related interpretations. The standard will be mandatory on January 1, 2018 for the Company with earlier adoption permitted. The Company is currently evaluating the impact of this standard on its consolidated financial statements.

In July 2014, the IASB amended IFRS 9, "Financial Instruments", to bring together the classification and measurement, impairment and hedge accounting phases of the IASB's project to replace IAS 39, "Financial Instruments: Recognition and Measurement". The standard supersedes all previous versions of IFRS 9 and will be mandatory on January 1, 2018 for the Company with earlier application permitted. The Company is currently evaluating the impact of this standard on its consolidated financial statements.

In January 2016, IASB issued IFRS 16, "Leases", which specifies how an IFRS reporter will recognize, measure, present and disclose leases. The standard provides a single lessee accounting model, requiring lessees to recognise assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Lessors continue to classify leases as operating or finance, with IFRS 16's approach to lessor accounting substantially unchanged from its predecessor, IAS 17. The standard will be mandatory for annual periods beginning on or after January 1, 2019. The Company is currently evaluating the impact of this standard on its consolidated financial statements.

## Financial Instruments and Risk Management

### Fair Value of financial instruments

A detailed description of the methods and assumptions used to measure the fair value of the Company financial instruments and their fair value are discussed in Note 16 – Fair Value of Financial Instruments in the 2016 consolidated financial statements of the Company.

### Financial Risk Management

For a detailed description of the nature and extent of risks arising from financial instruments, and their related risk management, refer to Note 12 of the unaudited condensed interim consolidated financial statements for the three and six-month periods ended June 30, 2017 and 2016. The Company is not aware of any significant changes to its risks factors from those disclosed at that time.

### Risk and Uncertainties

For a detailed description of risk factors associated with 5N Plus and its business, refer to "Risk and Uncertainties" of 5N Plus' 2016 MD&A dated February 21, 2017. Factors of uncertainty and risks that might result in such differences include the risks associated with our growth strategy, international operations, international trade regulations, environmental regulations, competition, commodity price, source of supply, protection of intellectual property, inventory price, business interruptions, dependence on key personnel, collective agreements, and those associated with public issuer status. The company is not aware of any significant changes to its risks factors disclosed at that time.

# Management's Discussion and Analysis

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## Non-IFRS Measures

In this Management's Report, the Company's management uses certain measures which are not in accordance with IFRS. Non-IFRS measures are useful supplemental information but may not have a standardized meaning according to IFRS.

Backlog represents the expected orders we have received but have not yet executed and that are expected to translate into sales within the next twelve months expressed in number of days. Bookings represent orders received during the period considered, expressed in days, and is calculated by adding revenues to the increase or decrease in backlog for the period considered divided by annualized year revenues. We use backlog to provide an indication of expected future revenues in days, and bookings to determine our ability to sustain and increase our revenues.

EBITDA means net earnings (loss) before interest expenses (revenues), income taxes, depreciation and amortization. We use EBITDA because we believe it is a meaningful measure of the operating performance of our ongoing business without the effects of certain expenses. The definition of this non-IFRS measure used by the Company may differ from that used by other companies.

EBITDA margin is defined as EBITDA divided by revenues.

Adjusted EBITDA means EBITDA as defined above before impairment of inventories, allowance for doubtful of a receivable from a related party, litigation and restructuring costs, gain on disposal of property, plant and equipment, change in fair value of debenture conversion option, foreign exchange and derivatives loss (gain). We use adjusted EBITDA because we believe it is a meaningful measure of the operating performance of our ongoing business without the effects of inventory write-downs. The definition of this non-IFRS measure used by the Company may differ from that used by other companies.

Adjusted EBITDA margin is defined as Adjusted EBITDA divided by revenues.

Adjusted Operating expenses means Operating charges before litigation and restructuring costs (income), gain on disposal on property, plant and equipment and depreciation and amortization. We use adjusted operating expenses to calculate the Adjusted EBITDA. We believe it is a meaningful measure of the operating performance of our ongoing business. The definition of this non-IFRS measure used by the Company may differ from that used by other companies.

Adjusted net earnings (loss) means the net earnings (loss) before the effect of charge of impairment related to inventory, PPE and intangible assets, impairment of goodwill, allowance for doubtful of a note receivable from a related party, litigation and restructuring costs, change in fair value of debenture conversion option net of the related income tax. We use adjusted net earnings (loss) because we believe it is a meaningful measure of the operating performance of our ongoing business without the effects of unusual inventory write-downs and property plant and equipment, intangible asset impairment charges, allowance for doubtful of a receivable from a related party, litigation and restructuring costs and change in fair value of debenture conversion option. The definition of this non-IFRS measure used by the Company may differ from that used by other companies.

Basic adjusted net earnings (loss) per share means adjusted net earnings (loss) divided by the weighted average number of outstanding shares. We use basic adjusted net earnings (loss) per share because we believe it is a meaningful measure of the operating performance of our ongoing business without the effects of unusual inventory write-downs and property plant and equipment and intangible asset impairment charges, allowance for doubtful of a receivable from a related party, litigation and restructuring costs and change in fair value of debenture conversion option per share. The definition of this non-IFRS measure used by the Company may differ from that used by other companies.

Funds (used in) from operations means the amount of cash generated from operating activities before changes in non-cash working capital balances related to operations. This amount appears directly in the consolidated statements of cash flows of the Company. We consider funds (used in) from operations to be a key measure as it demonstrates the Company's ability to generate cash necessary for future growth and debt repayment.

Gross margin is a measure we use to monitor the sales contribution after paying cost of sales excluding depreciation of property, plant and equipment. We also expressed this measure in percentage of revenues by dividing the gross margin value by the total revenue.

## Management's Discussion and Analysis

Net debt or net cash is a measure we use to monitor how much debt we have after taking into account cash and cash equivalents. We use it as an indicator of our overall financial position, and calculate it by taking our total debt, including the current portion and the cross-currency swap related to the convertible debenture, and subtracting cash and cash equivalents.

Return on Capital Employed (ROCE) is a non-IFRS financial measure, calculated by dividing the annualized Adjusted EBIT by capital employed at the end of the period. Adjusted EBIT is calculated as the Adjusted EBITDA less depreciation and amortization (adjusted for accelerated depreciation charge, if any). Capital employed is the sum of the accounts receivable, the inventory, the PPE, the goodwill and intangibles less trade and accrued liabilities (adjusted for exceptional items). We use ROCE to measure the return on capital employed, whether the financing is through equity or debt. In our view, this measure provides useful information to determine if capital invested in the Company yields competitive returns. The usefulness of ROCE is limited by the fact that it is a ratio and not providing information as to the absolute amount of our net income, debt or equity. It also excludes certain items from the calculation and other companies may use a similar measure but calculate it differently.

Working capital is a measure of liquid assets that is calculated by taking current assets and subtracting current liabilities. Given that the Company is currently indebted, we use it as an indicator of our financial efficiency and aim to maintain it at the lowest possible level.

Working capital ratio is calculated by dividing current assets by current liabilities.

### Additional Information

Our common shares trade on the Toronto Stock Exchange (TSX) under the ticker symbol VNP. Additional information relating to the Company, including the Company's annual information form is available under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).

### Selected Quarterly Financial Information

As at and for the three months ended:

(in thousands of United States dollars except per share amounts)	June 30, 2017	Mar. 31, 2017	Dec. 31, 2016	Sept. 30, 2016	June 30, 2016	Mar. 31, 2016	Dec. 31, 2015	Sept. 30, 2015
	\$	\$	\$	\$	\$	\$	\$	\$
Revenue	56,229	60,870	54,704	55,491	57,435	63,868	59,367	68,732
EBITDA <sup>1</sup>	6,341	9,675	4,803	2,066	5,358	2,884	(26,000)	(26,136)
Adjusted EBITDA <sup>1</sup>	6,839	6,072	4,331	6,816	4,714	4,250	674	1,052
Net earnings (loss) attributable to equity holders of 5N Plus	3,416	4,154	158	(4,232)	86	(1,907)	(42,615)	(32,171)
Basic earnings (loss) per share attributable to equity holders of 5N Plus	\$0.04	\$0.05	\$-	(\$0.05)	\$-	(\$0.02)	(\$0.51)	(\$0.38)
Net earnings (loss)	3,415	4,153	158	(4,232)	87	(1,909)	(42,615)	(32,171)
Basic earnings (loss) per share	\$0.04	\$0.05	\$-	(\$0.05)	\$-	(\$0.02)	(\$0.51)	(\$0.38)
Diluted earnings (loss) per share	\$0.04	\$0.05	\$-	(\$0.05)	\$-	(\$0.02)	(\$0.51)	(\$0.38)
Adjusted net earnings (loss) <sup>1</sup>	3,647	1,602	148	2,298	45	(653)	(12,966)	(5,652)
Basic adjusted net earnings (loss) per share <sup>1</sup>	\$0.04	\$0.02	\$-	\$0.03	\$-	(\$0.01)	(\$0.15)	(\$0.07)
Funds from (used in) operations <sup>1</sup>	7,945	8,730	5,256	238	4,521	2,471	(5,734)	(620)
Backlog <sup>1</sup>	135 days	128 days	136 days	148 days	157 days	145 days	158 days	134 days

<sup>1</sup> See Non-IFRS Measures

# Management's Discussion and Analysis

## Metal Prices

(in U.S. dollars per kilo)

Bismuth



Gallium



Germanium



Indium



Selenium



Tellurium

