



# 3

## MANAGEMENT REPORT

QUARTER ENDED  
SEPTEMBER 30,  
2018



**5N PLUS**

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" 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 Q3 2018 and the audited consolidated financial statements and the accompanying notes for the year ended December 31, 2017. This MD&A has been prepared in accordance with the requirements of the Canadian Securities Administrators.

Information contained herein includes any significant developments to November 6, 2018, 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.

"Q3 2018" and "Q3 2017" refer to the three-month periods ended September 30, 2018 and 2017 respectively, and "YTD 2018" and "YTD 2017" refer to the nine-month periods ended September 30, 2018 and 2017 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.

### **Restatement of Comparatives Results**

Certain comparative results in this MD&A have been restated to reflect a change in our definition of Adjusted Operating Expenses, Adjusted EBITDA and Adjusted Net Earnings. Please refer to the "Selected Quarterly Financial Information" section.

### **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 the 5N Plus' 2017 MD&A dated February 20, 2018 and note 12 of the unaudited condensed interim consolidated financial statements for the three and nine-month periods ended September 30, 2018 and 2017, available on [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

---

## Overview

5N Plus is a leading producer of engineered materials. 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 pharmaceutical, healthcare, renewable energy, aerospace, security and sensing, imaging, technical and industrial materials, extractive and catalytic materials along with animal feed additives.

## 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 materials 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 growth initiatives and future M&A opportunities.

---

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

## Highlights of Q3 2018 and YTD 2018

### Strong quarter performance with YTD Adjusted EBITDA growth supporting 5N21

In the third quarter of 2018, 5N Plus posted another strong quarterly performance characterized by growth in revenue and significant expansion in earnings as compared to the same period last year. These results were delivered despite notable headwinds from metal consumables which in some cases were unfavorably impacted by up to 25% movement in metal notations. The strong performance was not only driven by healthy demand for the Company's products and services but also progress in the Company's upstream activities which helped mitigate metal related adverse impacts.

- Adjusted EBITDA<sup>1</sup> and EBITDA<sup>1</sup> for the third quarter of 2018 were \$8.6 million and \$7.8 million as compared to \$6.9 million and \$6.4 million for the same quarter of 2017. This is an improvement of more than 24% to the Adjusted EBITDA when compared to the same period last year.
- Adjusted EBITDA and EBITDA for the nine-month period ended September 30, 2018 were \$25.4 million and \$23.4 million as compared to \$22.8 million and \$22.4 million for the same period in 2017.
- Revenue in Q3 2018 grew to \$53.4 million as compared to \$50.3 million in Q3 2017, despite the unfavorable impact from metal notations. Solid demand for the Company's products and services drove revenue growth while enhanced sales mix and increased contribution from upstream activities helped expand gross margin<sup>1</sup> from 26.5% in the third quarter of 2017 to 27.6% in the third quarter of 2018.
- Net earnings for the quarter closed at \$3.5 million or \$0.04 per share as compared to \$2.2 million or \$0.03 per share in Q3 2017.
- Net debt<sup>1</sup> was \$21.9 million as at September 30, 2018, an increase of \$10.5 million compared to December 31, 2017 due to higher working capital requirements driven in large part by various hedging initiatives.
- Annualized ROCE<sup>1</sup> registered at 16.4% in the third quarter of 2018 compared to 15.6% at the end of 2017.
- As of September 30, 2018, the backlog<sup>1</sup> reached a level of 181 days of sales outstanding, representing an increase of 3 days compared to September 30, 2017, and 11 days compared to June 30, 2018. Bookings<sup>1</sup> in Q3 2018 reached 86 days compared to 118 days in Q3 2017 and 89 days in Q2 2018.
- Based on the current trajectory, Adjusted EBITDA is expected to close in the upper range of the Company's \$30-\$33 million guidance for 2018.

As optimization of the Company's core businesses with focus on increased contribution from higher value-added products and services has been delivering positive results over the past several quarters, contribution from upstream activities are beginning to show their benefit in both supporting profitability and reducing earnings volatility. To that end, the Company will continue to strengthen its upstream capabilities while at the same time invest on its downstream growth initiatives; all of which are congruent with the Company's strategic plan 5N21.

---

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

# Management's Discussion and Analysis

## Summary of Results

	Q3 2018	Q3 2017	YTD 2018	YTD 2017
	\$	\$	\$	\$
Revenue	53,379	50,325	170,285	167,424
Adjusted operating expenses <sup>1</sup> *	(44,798)	(43,383)	(144,847)	(144,600)
Adjusted EBITDA <sup>1</sup>	8,581	6,942	25,438	22,824
Impairment of inventory	-	-	-	-
Share-based compensation expense	(788)	(787)	(2,577)	(3,758)
Litigation and restructuring (costs) income	(138)	-	450	3,368
Gain on disposal of property, plant and equipment	325	-	510	390
Change in fair value of debenture conversion option	-	312	-	18
Foreign exchange and derivative loss	(208)	(40)	(389)	(399)
EBITDA <sup>1</sup>	7,772	6,427	23,432	22,443
Interest on long-term debt, imputed interest and other interest expense	901	1,496	5,409	4,725
Depreciation and amortization	1,874	1,775	6,341	5,792
Earnings before income taxes	4,997	3,156	11,682	11,926
Income tax expense (recovery)				
Current	1,330	2,042	3,803	3,352
Deferred	209	(1,109)	(2,047)	(1,217)
	1,539	933	1,756	2,135
Net earnings	3,458	2,223	9,926	9,791
Basic earnings per share	\$0.04	\$0.03	\$0.12	\$0.12
Diluted earnings per share	\$0.04	\$0.03	\$0.12	\$0.12

<sup>1</sup>Excluding share-based compensation expense, litigation and restructuring income, gain on disposal of property, plant and equipment and depreciation and amortization.

## Revenue by Segment and Gross Margin

	Q3 2018	Q3 2017	Change	YTD 2018	YTD 2017	Change
	\$	\$		\$	\$	
Electronic Materials	19,605	17,626	11%	61,646	55,531	11%
Eco-Friendly Materials	33,774	32,699	3%	108,639	111,893	(3%)
<b>Total revenue</b>	<b>53,379</b>	<b>50,325</b>	<b>6%</b>	<b>170,285</b>	<b>167,424</b>	<b>2%</b>
Cost of sales	(40,335)	(38,670)	4%	(131,145)	(129,479)	1%
Depreciation on property, plant and equipment (PPE)	1,666	1,705	(2%)	5,706	5,545	3%
<b>Gross margin<sup>1</sup></b>	<b>14,710</b>	<b>13,360</b>	<b>10%</b>	<b>44,846</b>	<b>43,490</b>	<b>3%</b>
<b>Gross margin percentage<sup>1</sup></b>	<b>27.6%</b>	<b>26.5%</b>		<b>26.3%</b>	<b>26.0%</b>	

In Q3 2018, revenue increased by 6% compared to Q3 2017 impacted by volume. The gross margin supported by a favorable sales mix and strong product demand, reached 27.6% in Q3 2018 compared to 26.5% in Q3 2017, tracking an average gross margin of 26.3% or \$44.8 million after nine months compared to 26.0%, or \$43.5 million for the same period of 2017.

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

## Operating earnings, EBITDA and Adjusted EBITDA

	Q3 2018	Q3 2017	Change	YTD 2018	YTD 2017	Change
	\$	\$		\$	\$	
Electronic Materials	8,677	5,565	56%	22,084	19,193	15%
Eco-Friendly Materials	2,214	3,306	(33%)	11,402	11,309	1%
Corporate	(2,310)	(1,929)	20%	(8,048)	(7,678)	5%
<b>Adjusted EBITDA<sup>1</sup></b>	<b>8,581</b>	<b>6,942</b>	<b>24%</b>	<b>25,438</b>	<b>22,824</b>	<b>11%</b>
<b>EBITDA<sup>1</sup></b>	<b>7,772</b>	<b>6,427</b>	<b>21%</b>	<b>23,432</b>	<b>22,443</b>	<b>4%</b>
<b>Operating earnings</b>	<b>6,106</b>	<b>4,380</b>	<b>39%</b>	<b>17,480</b>	<b>17,032</b>	<b>3%</b>

In Q3 2018, Adjusted EBITDA<sup>1</sup> was \$8.6 million compared to \$6.9 million in Q3 2017. In YTD 2018, Adjusted EBITDA increased by \$2.6 million, from \$22.8 million in YTD 2017 to \$25.4 million, supported by a favorable sales mix, strong product demand and overall performance of operating activities.

In Q3 2018, EBITDA<sup>1</sup> was \$7.8 million compared to \$6.4 million in Q3 2017. In YTD 2018, EBITDA was \$23.4 million compared to \$22.4 million in YTD 2017. The increase is mainly due to better realized gross margin, and lower share-based compensation expense this year.

Operating earnings were \$6.1 million compared to \$4.4 million in Q3 2017 and \$17.5 million compared to \$17.0 million in YTD 2017.

### Electronic Materials Segment

Adjusted EBITDA increased by \$3.1 million to \$8.7 million representing an Adjusted EBITDA margin<sup>1</sup> of 44% compared to 32% in Q3 2017. Adjusted EBITDA increased by \$2.9 million to \$22.1 million representing an Adjusted EBITDA margin of 36% compared to 35% in YTD 2017.

### Eco-Friendly Materials Segment

Adjusted EBITDA decreased by \$1.1 million representing an Adjusted EBITDA margin of 7% in Q3 2018 and 10% in Q3 2017. Adjusted EBITDA increased by \$0.1 million representing an Adjusted EBITDA margin of 10% in YTD 2018 and YTD 2017.

## Net Earnings and Adjusted Net Earnings

	Q3 2018	Q3 2017	YTD 2018	YTD 2017
	\$	\$	\$	\$
Net earnings	3,458	2,223	9,926	9,791
Basic earnings per share	\$0.04	\$0.03	\$0.12	\$0.12
Reconciling items:				
Share-based compensation expense	788	787	2,577	3,758
Accelerated imputed interest	-	-	1,490	-
Litigation and restructuring costs (income)	138	-	(450)	(3,368)
Gain on disposal of property, plant and equipment	(325)	-	(510)	(390)
Change in fair value of debenture conversion option	-	(312)	-	(18)
Income tax (recovery) expense on taxable items above	(140)	(126)	(956)	232
<b>Adjusted net earnings<sup>1</sup></b>	<b>3,919</b>	<b>2,572</b>	<b>12,077</b>	<b>10,005</b>
<b>Basic adjusted net earnings per share<sup>1</sup></b>	<b>\$0.05</b>	<b>\$0.03</b>	<b>\$0.14</b>	<b>\$0.12</b>

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

## Management's Discussion and Analysis

Net earnings were \$3.5 million or \$0.04 per share in Q3 2018 compared to \$2.2 million or \$0.03 per share in Q3 2017. Adjusted net earnings<sup>1</sup> increased by \$1.3 million and reached \$3.9 million in Q3 2018, compared to \$2.6 million in Q3 2017. Excluding the income tax recovery, the main items reconciling the Adjusted net earnings are the share-based compensation expense, litigation and restructuring costs mitigated by gain on the disposal of redundant PPE.

In YTD 2018, net earnings reached \$9.9 million compared to \$9.8 million in YTD 2017. Adjusted net earnings increased by \$2.1 million and reached \$12.1 million compared to \$10.0 million in YTD 2017. Excluding the income tax recovery, the main items reconciling the Adjusted net earnings are the share-based compensation expense, the litigation and restructuring income, the gain on the disposal of a redundant PPE as well as the accelerated imputed interest recognized as an expense following the early redemption of the CA\$40.0 million convertible debentures in June 2018.

### Bookings and Backlog

	BACKLOG <sup>1</sup>			BOOKINGS <sup>1</sup>		
	Q3 2018	Q2 2018	Q3 2017	Q3 2018	Q2 2018	Q3 2017
	\$	\$	\$	\$	\$	\$
Electronic Materials	62,175	59,371	57,590	22,409	19,231	30,639
Eco-Friendly Materials	43,830	49,544	40,334	28,060	37,759	34,418
<b>Total</b>	<b>106,005</b>	<b>108,915</b>	<b>97,924</b>	<b>50,469</b>	<b>56,990</b>	<b>65,057</b>

(number of days based on annualized revenues) *	BACKLOG <sup>1</sup>			BOOKINGS <sup>1</sup>		
	Q3 2018	Q2 2018	Q3 2017	Q3 2018	Q2 2018	Q3 2017
Electronic Materials	289	253	298	104	82	159
Eco-Friendly Materials	118	122	113	76	93	96
Weighted average	181	170	178	86	89	118

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

#### Q3 2018 vs Q2 2018

Backlog<sup>1</sup> as at September 30, 2018 reached a level of 181 days of annualized revenue, compared to 170 days in the previous quarter.

Backlog as at September 30, 2018 for the Electronic Materials segment represented 289 days of annualized segment revenue, an increase of 36 days or 14% over the backlog of June 30, 2018. The backlog for the Eco-Friendly Materials segment represented 118 days of annualized segment revenue, a decrease of 4 days or 3% over the backlog of June 30, 2018.

Bookings<sup>1</sup> for the Electronic Materials segment increased by 22 days, from 82 days in Q2 2018 to 104 days in Q3 2018. Bookings for the Eco-Friendly Materials segment were 93 days in Q2 2018 and 76 days in Q3 2018.

#### Q3 2018 vs Q3 2017

Backlog as at September 30, 2018 for the Electronic Materials segment decreased by 9 days and increased by 5 days for the Eco-Friendly Materials segment compared to September 30, 2017.

Bookings decreased by 55 days for the Electronic Materials segment and by 20 days for the Eco-Friendly Materials segment compared to the previous year quarter.

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

## Expenses

	Q3 2018	Q3 2017	YTD 2018	YTD 2017
	\$	\$	\$	\$
Depreciation and amortization	1,874	1,775	6,341	5,792
SG&A	5,723	6,069	19,227	19,542
Share-based compensation expense	788	787	2,577	3,758
Litigation and restructuring costs (income)	138	-	(450)	(3,368)
Financial expenses	1,109	1,224	5,798	5,106
Income tax expense	1,539	933	1,756	2,135
<b>Total expenses</b>	<b>11,171</b>	<b>10,788</b>	<b>35,249</b>	<b>32,965</b>

### Depreciation and Amortization

Depreciation and amortization expenses in Q3 2018 and YTD 2018 amounted to \$1.9 million and \$6.3 million respectively, compared to \$1.8 million and \$5.8 million for the same periods of 2017. The increase is primarily attributable to the completion of specific capital expenditures late 2017 and early 2018.

### SG&A

SG&A expenses in Q3 2018 and YTD 2018 amounted to \$5.7 million and \$19.2 million respectively, compared to \$6.1 million and \$19.5 million for the same periods of 2017.

### Share-Based Compensation Expense

Share-based compensation expense in Q3 2018 and Q3 2017 amounted to \$0.8 million, and to \$2.6 million and \$3.8 million in YTD 2018 and YTD 2017. The decrease is mainly due to the important rise in the Company's share price during the second and third quarter of 2017.

### Litigation and Restructuring Income

In Q3 2018, the Company sold its participation in the joint venture, Zhuhai Gallium Industry Co. for an amount of \$0.4 million and recognized a loss of \$0.3 million which was partially mitigated by an amount received of \$0.2 million following the liquidation of its other joint venture, Ingal Stade GmbH which had closed its manufacturing activities in 2016. In Q1 2018, the Company recorded an income from litigation and restructuring of \$0.6 million representing a non-recurring income relating to an amount receivable from an inactive legal entity for which no receivable had been recorded given the uncertainty.

No expenses or income from litigation or restructuring activity were recognized in Q3 2017 but in Q1 2017, the Company recognized 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, for a net income of \$3.4 million.

### Financial Expenses

Financial expenses in Q3 2018 amounted to \$1.1 million compared to \$1.2 million in Q3 2017. Financial expenses in YTD 2018 amounted to \$5.8 million compared to \$5.1 million in YTD 2017. The increase in financial expenses of \$0.7 million is mainly due to the accelerated imputed interest of \$1.5 million recognized as a non-cash expense following the early redemption of the CA\$40.0 million convertible debentures in June 2018 mitigated by lower cost from the drawdown on its senior credit facility as well as lower imputed interest on the outstanding debenture during Q3 2018. In YTD 2018, no charge related to the fair value of the debenture conversion option was recognized while in 2017 a minimum unfavorable charge was recognized.

### Income Taxes

The Company reported earnings before income taxes of \$5.0 million in Q3 2018 and \$11.7 million in YTD 2018. Income tax expense in Q3 2018 was \$1.5 million and \$1.8 million in YTD 2018. These amounts were favorably impacted by deferred tax assets applicable in certain jurisdictions.



# Management's Discussion and Analysis

## Liquidity and Capital Resources

	Q3 2018	Q3 2017	YTD 2018	YTD 2017
	\$	\$	\$	\$
Funds from operations <sup>1</sup>	6,582	4,263	20,002	20,938
Net changes in non-cash working capital items	(7,172)	1,578	(21,074)	(5,715)
Operating activities	(590)	5,841	(1,072)	15,223
Investing activities	(2,046)	(1,806)	(6,669)	(4,925)
Financing activities	360	466	719	77
Effect of foreign exchange rate changes on cash and cash equivalents	43	188	(203)	388
<b>Net (decrease) increase in cash and cash equivalents</b>	<b>(2,233)</b>	<b>4,689</b>	<b>(7,225)</b>	<b>10,763</b>

Cash used from operating activities amounted to \$0.6 million in Q3 2018 compared to cash generated by operation activities of \$5.8 million in Q3 2017. In YTD 2018, cash used in operations amounted to \$1.1 million compared to cash generated by operations of \$15.2 million in YTD 2017. The negative change in non-cash working capital in YTD 2018 resulted mainly from a decrease in trade and accrued liabilities of \$20.1 million combined with an increase of \$0.9 million in accounts receivable and \$1.4 million in inventory aimed at hedging commercial positions.

In Q3 2018, cash used in investing activities totaled \$2.0 million compared to \$1.8 million in Q3 2017 mainly due to higher investment in PPE mitigated by proceeds from the disposal of redundant PPE and investment in joint venture. In YTD 2018, cash used in investing activities totaled \$6.7 million compared to \$4.9 million in YTD 2017. This increase is explained by higher investment in PPE mitigated by proceed from the disposal of investment in joint venture.

Cash provided by financing activities amounted to \$0.4 million in Q3 2018 compared to \$0.5 million in Q3 2017. In YTD 2018, cash provided by financing activities amounted to \$0.7 million compared to \$0.1 million in YTD 2017. The increase of \$0.6 million is mainly explained by a contribution from a product development partnership program combined with the impact of the drawdown on the Company's senior credit facility to partially redeem the debentures in Q2 2018, while in YTD 2017, the Company had repurchased a certain number of shares under the common share repurchase program which ended in October 2017.

## Working Capital

	As at September 30, 2018	As at December 31, 2017
	\$	\$
Inventories	92,035	90,647
Other current assets	69,544	74,581
Current liabilities	(73,551)	(68,653)
<b>Working capital<sup>1</sup></b>	<b>88,028</b>	<b>96,575</b>
<b>Working capital current ratio<sup>1</sup></b>	<b>2.20</b>	<b>2.41</b>

The decrease in working capital<sup>1</sup> compared to December 31, 2017 was mainly attributable to the reclassification of the convertible debentures as current liability resulting from its maturing date of June 30, 2019, net of lower payable mainly due to payments of short term obligations since the beginning of the year, as well as slightly higher accounts receivable and inventory.

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

## Net Debt

	As at September 30, 2018	As at December 31, 2017
	\$	\$
Revolving credit facility	30,000	-
Long-term debt, current portion	185	271
Convertible debentures	19,322	48,768
Cross-currency swap	(844)	(3,602)
<b>Total Debt</b>	<b>48,663</b>	<b>45,437</b>
Cash and cash equivalents	(26,799)	(34,024)
<b>Net Debt<sup>1</sup></b>	<b>21,864</b>	<b>11,413</b>

Total debt, including the cross-currency swap, increased by \$3.2 million to \$48.7 million as at September 30, 2018, compared to \$45.4 million as at December 31, 2017.

Net debt<sup>1</sup>, after considering cash and cash equivalents, increased by \$10.5 million, from \$11.4 million as at December 31, 2017 to \$21.9 million as at September 30, 2018, mostly impacted by non-cash working capital requirements.

On June 28, 2018, the Company partially redeemed its 5.75% convertible unsecured subordinated debentures maturing on June 30, 2019 for an aggregate principal amount of CA\$40.0 million. On the same day, the Company completed a drawdown on its senior credit facility of US\$30.0 million to partially redeem the debentures on favorable terms reducing the current cost of gross debt. As at September 30, 2018, the aggregate principal amount of debentures currently outstanding was CA\$26.0 million.

Consequently, during the second quarter of 2018, the Company de-designated CA\$40.0 million of the nominal amount of the associated cross-currency swap and reclassified the net gain of \$0.1 million, representing the accumulated net changes in cash flow hedges, from accumulated other comprehensive loss to realized gain on de-designation within the condensed interim consolidated statement of earnings.

Following the early redemption of the CA\$40.0 million convertible debentures, an accelerated imputed interest of \$1.5 million was recognized during Q2 2018 as an expense in the condensed interim consolidated statement of earnings.

## Share Information

	As at November 6, 2018	As at September 30 2018
Issued and outstanding shares	84,609,791	84,512,291
Stock options potentially issuable	1,490,541	1,588,041
Convertible debentures potentially issuable	3,851,851	3,851,851

## 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, 2017.

## Commitments

As at September 30, 2018, in the normal course of business, the Company contracted letters of credit for an amount of \$0.3 million compared to \$0.4 million as at December 31, 2017.

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

# Management's Discussion and Analysis

---

## Contingencies

In the normal course of business, 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 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 nine-month period ended September 30, 2018 that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

## 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 2017 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, 2017. 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 2018, remain substantially unchanged from those described in the Company's audited consolidated financial statements for the fiscal year ended December 31, 2017, except for the new standards adopted in 2018.

### Adoption of New Accounting Standards

#### IFRS 15 - Revenues from Contracts with Customers

On January 1, 2018, the Company has adopted the new accounting standard IFRS 15 to all contracts using the modified retrospective approach. The adoption of this standard had no significant impact on the Company's consolidated financial statements.

Under the new revenue standard, the Company's revenue continues to be recognized when products are delivered to the customer, which is also the moment when control of the products is transferred, and when there is no unfulfilled obligation that could affect the customer's acceptance of the products. Delivery occurs when the products have been shipped to the specific location, the risks of loss have been transferred to the customer and has accepted the products in accordance with the sales contract.

#### IFRS 9 - Financial Instruments

On January 1, 2018, the Company has also adopted the new accounting standard IFRS 9. The adoption of this standard had no significant impact on the Company's consolidated financial statements, except for the classification of its financial assets and liabilities as described below.

As permitted by IFRS 9, the Company has elected to continue to apply all of the hedge accounting requirements of IAS 39.

#### Classification

Since January 1, 2018, the Company classifies its financial assets and liabilities in the following measurement categories:

- a) those to be measured subsequently at fair value (either through other comprehensive income (FVOCI), or through profit or loss (FVPL)), and
- b) those to be measured at amortized cost.

IAS 39	IFRS 9
<b>Financial assets and liabilities at fair value through profit and loss</b> Other current assets Derivative financial assets Derivative financial liabilities	<b>Financial assets and liabilities at fair value through profit or loss</b> Other current assets Derivative financial assets Derivative financial liabilities
<b>Loans and receivables</b> Cash and cash equivalents Accounts receivable	<b>Financial assets and liabilities at amortized cost</b> Cash and cash equivalents Accounts receivable Bank indebtedness Trade and accrued liabilities Long-term debt Convertible debentures
<b>Financial liabilities at amortized cost</b> Bank indebtedness Trade and accrued liabilities Long-term debt Convertible debentures	

# Management's Discussion and Analysis

---

## Measurement

At initial recognition, the Company measures a financial asset or financial liability at its fair value plus or minus, in the case of a financial asset or financial liability not at fair value through profit or loss (FVPL), transaction costs that are directly attributable to the acquisition or issue of the financial asset or financial liability. Transaction costs of financial assets or financial liabilities carried at FVPL are expensed in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest.

## Debt instruments

For the subsequent measurement, there are three measurement categories into which the Company classifies its debt instruments:

- a) **Amortized cost:** Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. Interest income from these financial assets is included in finance income using the effective interest rate method. Any gain or loss arising on derecognition is recognized directly in profit or loss and presented in other gains/(losses), together with foreign exchange gains and losses. Impairment losses are presented as separate line item in the consolidated statement of profit or loss.
- b) **Fair value through other comprehensive income (FVOCI):** Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVOCI. Movements in the carrying amount are taken through OCI, except for the recognition of impairment gains or losses, interest revenue and foreign exchange gains and losses which are recognized in profit or loss. When the financial asset is derecognized, the cumulative gain or loss previously recognized in OCI is reclassified from equity to profit or loss and recognized in other gains/(losses). Interest income from these financial assets is included in finance income using the effective interest rate method. Foreign exchange gains and losses are presented in other gains/(losses) and impairment expenses are presented as separate line item in the consolidated statement of profit or loss.
- c) **FVPL:** Assets that do not meet the criteria for amortized cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL is recognized in profit or loss and presented net within other gains/(losses) in the period in which it arises.

## Impairment

From January 1, 2018, the Company assesses on a forward-looking basis, the expected credit losses associated with its debt instruments carried at amortized cost and FVOCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

For trade receivables, the Company applies the simplified approach permitted by IFRS 9, which requires expected lifetime losses to be recognized from initial recognition of the receivables.

## Future Changes in Accounting Standards

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

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 recognize 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.

In June 2017, the IFRS Interpretations Committee of the IASB issued IFRIC 23, Uncertainty over Income Tax Treatments (IFRIC 23). The interpretation provides guidance on the accounting for current and deferred tax liabilities and assets in circumstances in which there is uncertainty over income tax treatments. The interpretation is effective for the annual period beginning on January 1, 2019. The Company has concluded that no impact will result from the application of IFRIC 23 on its 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 2017 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 24 of the audited consolidated financial statements for the year ended December 31, 2017. 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’ 2017 MD&A dated February 20, 2018. 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.

### Non-IFRS Measures

In this Management's Discussion and Analysis, 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 are 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 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, share-based compensation expense, impairment of non-current assets, litigation and restructuring costs (income), 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 share-based compensation expense, 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.

## Management's Discussion and Analysis

---

Adjusted net earnings means the net earnings (loss) before the effect of charge of impairment related to inventory, PPE and intangible assets, share-based compensation expense, litigation and restructuring costs (income), gain on disposal of property, plant and equipment, 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, share-based compensation expense, litigation and restructuring costs (income), gain on disposal of property, plant and equipment 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, share-based compensation expense, litigation and restructuring costs (income), gain on disposal of property, plant and equipment 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 and impairment inventory charge. We also expressed this measure in percentage of revenues by dividing the gross margin value by the total revenue.

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

(in thousands of United States dollars except per share amounts)	Sept. 30, 2018	June 30, 2018	Mar. 31, 2018	Dec. 31, 2017	Sept. 30, 2017	June 30, 2017	Mar. 31, 2017	Dec. 31, 2016
	\$	\$	\$	\$	\$	\$	\$	\$
Revenue	53,379	58,359	58,547	52,492	50,325	56,229	60,870	54,704
EBITDA <sup>1</sup>	7,772	7,860	7,800	4,420	6,427	6,341	9,675	4,803
Adjusted EBITDA <sup>1</sup>	8,581	8,972	7,885	6,763	6,942	9,236	6,646	5,010
Net earnings attributable to equity holders of 5N Plus	3,457	3,417	3,051	2,229	2,224	3,416	4,154	158
Basic earnings per share attributable to equity holders of 5N Plus	\$0.04	\$0.04	\$0.04	\$0.03	\$0.03	\$0.04	\$0.05	\$-
Net earnings	3,458	3,420	3,048	2,222	2,223	3,415	4,153	158
Basic earnings per share <sup>1</sup>	\$0.04	\$0.04	\$0.04	\$0.03	\$0.03	\$0.04	\$0.05	\$-
Diluted earnings per share	\$0.04	\$0.04	\$0.04	\$0.03	\$0.03	\$0.04	\$0.05	\$-
Adjusted net earnings <sup>1</sup>	3,919	5,344	2,814	3,884	2,572	5,409	2,024	644
Basic adjusted net earnings per share <sup>1</sup>	\$0.05	\$0.06	\$0.03	\$0.05	\$0.03	\$0.06	\$0.02	\$0.01
Funds from operations <sup>1</sup>	6,582	7,194	6,226	5,398	4,263	7,945	8,730	5,256
Backlog <sup>1</sup>	181 days	170 days	172 days	187 days	178 days	135 days	128 days	136 days

(in thousands of United States dollars)	Dec. 31, 2017	Sept. 30, 2017	June 30, 2017	Mar. 31, 2017	Dec. 31, 2016	Sept. 30, 2016	June 30, 2016
	\$	\$	\$	\$	\$	\$	\$
<b>Adjusted operating expenses – previous definition</b>	46,441	44,170	49,390	54,798	50,373	48,675	52,721
Share-based compensation expense	(712)	(787)	(2,397)	(574)	(679)	(140)	(556)
<b>Adjusted operating expenses<sup>1</sup> – current definition</b>	45,729	43,383	46,993	54,224	49,694	48,535	52,165

(in thousands of United States dollars)	Dec. 31, 2017	Sept. 30, 2017	June 30, 2017	Mar. 31, 2017	Dec. 31, 2016	Sept. 30, 2016	June 30, 2016
	\$	\$	\$	\$	\$	\$	\$
<b>Adjusted EBITDA – previous definition</b>	6,051	6,155	6,839	6,072	4,331	6,816	4,714
Share-based compensation expense	712	787	2,397	574	679	140	556
<b>Adjusted EBITDA<sup>1</sup> – current definition</b>	6,763	6,942	9,236	6,646	5,010	6,956	5,270

(in thousands of United States dollars, except per share amounts)	Dec. 31, 2017	Sept. 30, 2017	June 30, 2017	Mar. 31, 2017	Dec. 31, 2016	Sept. 30, 2016	June 30, 2016
	\$	\$	\$	\$	\$	\$	\$
<b>Adjusted net earnings – previous definition</b>	3,361	1,994	3,647	1,602	148	2,298	45
<b>Basic adjusted net earnings per share – previous definition</b>	\$0.04	\$0.02	\$0.04	\$0.02	\$-	\$0.03	\$-
Share-based compensation expense	712	787	2,397	574	679	140	556
Income tax expense on taxable items above	(189)	(209)	(635)	(152)	(183)	(38)	(150)
<b>Adjusted net earnings<sup>1</sup> – current definition</b>	3,884	2,572	5,409	2,024	644	2,400	451
<b>Basic adjusted net earnings per share<sup>1</sup> – current definition</b>	\$0.05	\$0.03	\$0.06	\$0.02	\$0.01	\$0.03	\$0.01

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



# Management's Discussion and Analysis

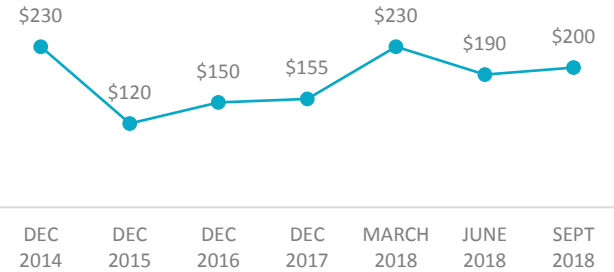
## Metal Prices

(in U.S. dollars per kilo)

Bismuth



Gallium



Germanium



Indium



Selenium



Tellurium



Source : Low Metal Bulletin