



5N PLUS

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**MANAGEMENT
REPORT**

**QUARTER
ENDED**

**DECEMBER 31
2017**

Management's Discussion and Analysis

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 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 February 20, 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.

"Q4 2017" and "Q4 2016" refer to the three-month periods ended December 31, 2017 and 2016 respectively, and "FY 2017" and "FY 2016" refer to the twelve-month periods ended December 31, 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. Factors of uncertainty and risk that might result in such differences include the risks related to growth strategy, credit, liquidity, interest rate, inventory pricing, commodity pricing, currency fluctuation, fair value, source of supply, environmental regulations, competition, dependence on key personnel, business interruptions, protection of intellectual property, international operations, international trade regulations, collective agreements and being a public issuer. A description of the risks affecting the Company's business and activities appears under the heading "Risk and Uncertainties" of this MD&A dated February 20, 2018. 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 specialty chemicals and 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 and animal feed additive.

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 EBITDA¹ 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.

¹ See Non-IFRS Measures

Management's Discussion and Analysis

Highlights of Q4 2017 and Fiscal Year 2017 – 5N21 Strategic Plan is Paying Off

The Company completed a second financial year under the guidance of its strategic plan 5N21, delivering significant improvement reflected by the various financial metrics, lending credence to the efficacy of the plan. By the end of 2017, nearly all initiatives linked to the first pillar of 5N21, namely extraction of more value from core businesses and existing assets, were successfully completed. At the same time, new initiatives related to the second and third pillars of 5N21, namely increasing contribution from upstream activities and delivering quality growth from new initiatives gained momentum. Consequently, at the end of the year, significant enhancement in margins and profitability were achieved, while, earnings volatility reduced as the Company continued to shift focus from lower margin products with high content of pass-through commodities to products and services requiring higher contribution from value-added activities and technological solutions. Furthermore, the Company continued to deliver recurrent cashflows and further solidified its balance sheet which has enhanced its options going forward.

- During the year, Adjusted EBITDA¹ and EBITDA¹ reached \$25.1 million and \$26.9 million, compared to \$20.1 million and \$15.1 million in 2016. The Adjusted EBITDA demonstrates improved profitability, with gross margin¹ reaching 26.1% compared to 22.4% in 2016 largely supported by growth in value-added activities and services within an environment of stable commodity prices and sustainable demand.
- A number of factors culminated in a net positive impact on EBITDA for 2017 such as optimizing commercial agreements yielding a \$3.0 million gain and a realized gain of \$1.9 million on real estate disposal, all of which were envisioned to support the first pillar of 5N21, namely extracting more value from core businesses and existing assets. However, the EBITDA was negatively impacted by the repositioning of activities linked to production of powder alloys triggering an impairment charge of \$3.1 million.
- The Adjusted EBITDA and EBITDA for the fourth quarter reached \$6.1 million and \$4.4 million in 2017 compared to \$4.3 million and \$4.8 million in 2016.
- Net earnings for the year 2017 reached \$12.0 million or \$0.14 per share compared to a net loss of \$5.9 million or (\$0.07) per share for the year 2016.
- Growth in sales from products and services with higher value-added component resulted in significant improvement in gross margin percentage and absolute dollars reaching \$57.3 million in 2017 compared to \$51.8 million in 2016. Revenue in 2017 reached \$219.9 million compared to \$231.5 million in 2016, mainly due to lower sales of pass-through metal component, consistent with the Company's plan to reduce its earnings volatility. Return on Capital Employed (ROCE)¹ reached 12.3% in 2017 as compared to 6.7% in 2016 reflecting the overall margin expansion associated with the Company's products and services.
- Net debt¹ was further reduced during the year and stood at \$11.4 million as at December 31, 2017 down from \$19.0 million for the same period last year, positively impacted by working capital management and overall better performance.
- Backlog¹ reached as at December 31, 2017 a level of 187 days of sales outstanding, higher than the previous quarter following the renewal pattern of most contracts which generally occurs in the fourth quarter or the first quarter of the year. Bookings¹ in Q4 2017 reached 108 days compared to 118 days in Q3 2017 and 78 days in Q4 2016.
- On February 20, 2017, 5N Plus announced changes to its executive management structure. Responsibilities assumed by the former functions of Chief Commercial Officer and Chief Operating Officer were reallocated across the existing business segments Eco-Friendly and Electronic Materials.

¹ See Non-IFRS Measures

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- On March 2, 2017, la Caisse de dépôt et placement du Québec announced the acquisition of 8,700,000 additional shares of 5N Plus on the secondary market, reinvesting \$14.8 million, bringing la Caisse's ownership to 18.93%.
- On October 11, 2017, 5N Plus announced that its Electronic Materials segment had been awarded a multi-year program by the U.S. Government to supply engineered semiconductor materials essential for space and aeronautical missions. The award was granted following a comprehensive multi-party competitive process with emphasis on total value creation based on products and services rendered. The program is expected to commence in the second half of 2018.
- On November 6, 2017, 5N Plus announced that the footprint optimization initiatives announced a year earlier, when unveiling its 5N21, had been completed. As a part of this initiative, all key product lines formerly produced at its Wellingborough, U.K, plant have been successfully relocated to other plants within the Group, namely plants in Canada, Germany and China.
- On December 7, 2017, 5N Plus announced its entry into the animal feed minerals market, focusing initially on the production and development of animal feed containing trace elements essential for good health and nutrition. This sector of the feed minerals market is assessed to be worth in excess of \$100 million annually. The Company's investments will be in multiple phases with the initial tranche aimed at establishing capacity and capability in Europe and is slated for completion within 12 months, with qualification samples available in Q4 2018 and volume production shortly thereafter.

The end of 2017 marks the second, and a full year, under 5N21. Thus far, the Company's performance is driven by the execution of the plan's short-term objectives, mainly related to optimizing core businesses and global assets. The outcome can be summarized by significant growth in profitability, enhancement in quality of earnings and reduction of earnings volatility. Consequently, return on capital employed has improved markedly and the Company has continued to strengthen its balance sheet aided by recurrent cashflows.

With the short-term objectives of the plan successfully fulfilled, the Company has intensified its focus on mid to long-term objectives under 5N21 with the aim of transforming itself from a specialty chemicals and metals company to a leading materials technology company across the globe. Further expansion into future markets with value-added activities, increased contribution from growth initiatives and exerting more control over pass-through component of sales will be the topics of focus and relevance.

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Summary of Results

	Q4 2017	Q4 2016	FY 2017	FY 2016
	\$	\$	\$	\$
Revenue	52,492	54,704	219,916	231,498
Adjusted operating expenses ¹ *	(46,441)	(50,373)	(194,799)	(211,387)
Adjusted EBITDA ¹	6,051	4,331	25,117	20,111
Impairment of inventory	-	-	-	-
Gain on disposal of property, plant and equipment	1,497	-	1,887	-
Impairment of non-current assets	(3,100)	-	(3,100)	-
Litigation and restructuring (costs) income	(415)	-	2,953	(5,945)
Change in fair value of debenture conversion option	67	14	85	20
Foreign exchange and derivative gain (loss)	320	458	(79)	925
EBITDA ¹	4,420	4,803	26,863	15,111
Interest on long-term debt, imputed interest and other interest expense	1,372	1,851	6,097	8,241
Depreciation and amortization	2,434	2,120	8,226	10,739
Earnings (loss) before income taxes	614	832	12,540	(3,869)
Income tax expense (recovery)				
Current	243	(1,145)	3,595	440
Deferred	(1,851)	1,819	(3,068)	1,587
Net earnings (loss)	2,222	158	12,013	(5,896)
Basic earnings (loss) per share	\$0.03	\$0.00	\$0.14	(\$0.07)
Diluted earnings (loss) per share	\$0.03	\$0.00	\$0.14	(\$0.07)

*Excluding litigation and restructuring (income) costs, impairment of non-current assets, gain on disposal of property, plant and equipment and depreciation and amortization.

Revenue by Segment and Gross Margin

	Q4 2017	Q4 2016	Change	FY 2017	FY 2016	Change
	\$	\$		\$	\$	
Electronic Materials	17,917	19,333	(7%)	73,448	79,038	(7%)
Eco-Friendly Materials	34,575	35,371	(2%)	146,468	152,460	(4%)
Total revenue	52,492	54,704	(4%)	219,916	231,498	(5%)
Cost of sales	(41,035)	(44,802)	(8%)	(170,514)	(190,037)	(10%)
Depreciation on property, plant and equipment (PPE)	2,363	2,046	15%	7,908	10,353	(24%)
Gross margin¹	13,820	11,948	16%	57,310	51,814	11%
Gross margin percentage¹	26.3%	21.8%		26.1%	22.4%	

During Q4 2017 and FY 2017, revenue decreased by 4% and 5% respectively compared to the same periods of 2016. Although sales volumes were lower in 2017, gross margin¹ has improved reflecting the moderate price stability in metals supported by our selective approach focused on better margin products. The gross margin reached 26.3% in Q4 2017 compared to 21.8% in Q4 2016, tracking an average gross margin of 26.1% for the year, or \$57.3 million compared to 22.4%, or \$51.8 million for 2016.

¹ See Non-IFRS Measures

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Operating earnings, EBITDA and Adjusted EBITDA

	Q4 2017	Q4 2016	Change	FY 2017	FY 2016	Change
	\$	\$		\$	\$	
Electronic Materials	5,642	5,111	10%	24,835	19,824	25%
Eco-Friendly Materials	3,667	2,544	44%	14,976	13,467	11%
Corporate	(3,258)	(3,324)	2%	(14,694)	(13,180)	(11%)
Adjusted EBITDA¹	6,051	4,331	40%	25,117	20,111	25%
EBITDA¹	4,420	4,803	(8%)	26,863	15,111	78%
Operating earnings	1,599	2,211	(28%)	18,631	3,427	444%

In Q4 2017, operating earnings decreased by \$0.6 million to \$1.6 million compared to \$2.2 million in Q4 2016, mainly impacted by an impairment of non-current assets mitigated by better realized gross margins¹, and a gain on disposal of redundant property, plant and equipment ("PPE"). In FY 2017, operating earnings rose by \$15.2 million and reached \$18.6 million compared to \$3.4 million for the corresponding period last year, positively impacted by better realized gross margins, favorable litigation and restructuring income, lower depreciation and amortization, and a gain on disposal of properties, before impairment of non-current assets recorded in 2017.

In Q4 2017, EBITDA¹ reached \$4.4 million compared to \$4.8 million in Q4 2016. In Q4 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 as well as by the same reasons mentioned above.

Adjusted EBITDA¹ for the Electronic Materials segment increased by \$0.5 million to \$5.6 million representing an Adjusted EBITDA margin¹ of 31% compared to 26% in Q4 2016. Adjusted EBITDA for the Eco-Friendly Materials segment increased by \$1.1 million representing an Adjusted EBITDA margin of 11% compared to 7% in Q4 2016.

For the same reasons mentioned above, EBITDA for FY 2017 increased by \$11.8 million to \$26.9 million compared to \$15.1 million for the same period last year. For FY 2017, Adjusted EBITDA of the Electronic Materials segment increased by \$5.0 million to \$24.8 million representing an Adjusted EBITDA margin of 34% compared to 25% last year. Adjusted EBITDA for the Eco-Friendly Materials segment increased by \$1.5 million to \$15.0 million, representing an Adjusted EBITDA margin of 10% compared to 9% last year. The Adjusted EBITDA under Corporate for FY 2017 decreased compared to FY 2016 due to higher long-term incentive plan provisions recorded following the important increase of the Company's share price during the period.

Net Earnings (Loss) and Adjusted Net Earnings

	Q4 2017	Q4 2016	FY 2017	FY 2016
	\$	\$	\$	\$
Net earnings (loss)	2,222	158	12,013	(5,896)
Basic earnings (loss) per share	\$0.03	\$0.00	\$0.14	(\$0.07)
Reconciling items:				
Accelerated depreciation of tangible assets	-	-	-	1,804
Litigation and restructuring costs (income)	415	-	(2,953)	5,945
Gain on disposal of property, plant and equipment	(1,497)	-	(1,887)	-
Impairment of non-current assets	3,100	-	3,100	-
Change in fair value of debenture conversion option	(67)	(14)	(85)	(20)
Income tax (expense) recovery on taxable items above	(812)	4	416	5
Adjusted net earnings¹	3,361	148	10,604	1,838
Basic adjusted net earnings per share¹	\$0.04	\$0.00	\$0.13	\$0.02

¹ See Non-IFRS Measures

Management's Discussion and Analysis

Net earnings reached \$2.2 million in Q4 2017 compared to \$0.2 million in Q4 2016. In Q4 2017, Adjusted net earnings¹ increased by \$3.2 million and reached \$3.4 million compared to \$0.1 million in Q4 2016. Excluding the income tax expense, the main items reconciling the Adjusted net earnings in Q4 2017 are the impairment of non-current assets, higher litigation and restructuring costs mitigated by the gain on disposal of a redundant PPE.

Net earnings reached \$12.0 million in FY 2017 compared to a net loss of \$5.9 million in FY 2016. In FY 2017, Adjusted net earnings increased by \$8.8 million and reached \$10.6 million compared to \$1.8 million in FY 2016. Excluding the income tax expense, the main items reconciling the Adjusted net earnings for FY 2017 were costs related to the termination of a non-core activity and impairment on non-current assets mitigated by an income resulting from an amendment to optimize commercial agreements as well as gains on disposal on redundant PPE.

Bookings and Backlog

	BACKLOG ¹			BOOKINGS ¹		
	Q4 2017	Q3 2017	Q4 2016	Q4 2017	Q3 2017	Q4 2016
	\$	\$	\$	\$	\$	\$
Electronic Materials	59,705	57,590	35,417	20,032	30,639	13,821
Eco-Friendly Materials	47,681	40,334	46,377	41,922	34,418	32,702
Total	107,386	97,924	81,794	61,954	65,057	46,523

(number of days based on annualized revenues) *	BACKLOG ¹			BOOKINGS ¹		
	Q4 2017	Q3 2017	Q4 2016	Q4 2017	Q3 2017	Q4 2016
Electronic Materials	304	298	167	102	159	65
Eco-Friendly Materials	126	113	120	111	96	84
Weighted average	187	178	136	108	118	78

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

Q4 2017 vs Q3 2017

Backlog¹ as at December 31, 2017 reached a level of 187 days of annualized revenue, representing an increase of 9 days compared to the previous quarter.

Backlog as at December 31, 2017 for the Electronic Materials segment represented 304 days of annualized segment revenue, an increase of 6 days or 2% over the backlog ended September 30, 2017. The backlog for the Eco-Friendly Materials segment represented 126 days of annualized segment revenue, an increase of 13 days or 12% over the backlog ended September 30, 2017.

Bookings¹ for the Electronic Materials segment decreased by 57 days, from 159 days in Q3 2017 to 102 days in Q4 2017. Bookings for the Eco-Friendly Materials segment increased by 15 days, from 96 days in Q3 2017 to 111 days in Q4 2017.

Q4 2017 vs Q4 2016

Backlog as at December 31, 2017 for the Electronic Materials segment increased by 137 days and by 6 days for the Eco-Friendly Materials segment compared to December 31, 2016.

Bookings increased by 37 days for the Electronic Materials segment and by 27 days for the Eco-Friendly Materials segment compared to the previous year quarter.

¹ See Non-IFRS Measures

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Expenses

	Q4 2017	Q4 2016	FY 2017	FY 2016
	\$	\$	\$	\$
Depreciation and amortization	2,434	2,120	8,226	10,739
SG&A	6,678	6,195	26,220	25,986
Litigation and restructuring costs (income)	415	-	(2,953)	5,945
Impairment of non-current assets	3,100	-	3,100	-
Financial expenses	985	1,379	6,091	7,296
Income tax (recovery) expense	(1,608)	674	527	2,027
Total expenses	12,004	10,368	41,211	51,993

Depreciation and Amortization

Depreciation and amortization expenses in Q4 2017 and FY 2017 amounted to \$2.4 million and \$8.2 million respectively, compared to \$2.1 million and \$10.7 million for the same periods of 2016. The decrease is primarily attributable to the accelerated depreciation recorded in FY 2016 following the Company's decision to optimize its footprint.

SG&A

For Q4 2017 and FY 2017, SG&A expenses were \$6.7 million and \$26.2 million respectively, compared to \$6.2 million and \$26.0 million for the same periods of 2016.

Litigation and Restructuring Costs (Income)

In Q4 2017, the Company recorded litigation and restructuring costs of \$0.4 million related to an incident delaying the consolidation of US operations into a new updated and scaled facility, initiative announced in 2016. In FY 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, for a net income of \$3.0 million.

In Q3 2016, the Company recorded a provision for litigation and restructuring costs of \$4.9 million. Following the Company's announcement to consolidate its operations at Wellingborough, U.K. with other sites within the Group, and its operations at DeForest, Wisconsin, U.S.A. and Fairfield, Connecticut, U.S.A. during the first half of 2017 into a newly updated and scaled facility, the Company recorded restructuring and severance costs and other facility closure costs of \$3.5 million. The Company also recorded in Q3 2016, litigation costs of \$1.0 million following initiatives to renegotiate unfavourable purchasing contracts. In Q1 2016, the Company had recorded non-recurring costs of \$1.0 million for the closure of an administrative office in Europe as well as for the settlement of unfavorable supply contracts.

Impairment of non-current assets

In Q4 2017, the Company recorded an impairment charge on non-current assets of \$3.1 million (\$1.1 million for production equipment, \$0.8 million for technology and \$1.1 for development costs), included in the Electronic Materials segment, reflecting recent development to assumptions used in assessing the carrying value of specific product development assets. The change in assumptions is from an active decision to alter the market penetration strategy, other factors remaining constant. It is motivated by intentional delays in increasing production level in order to prioritize products with higher premiums in niche applications requiring longer market development cycle compared to other products. A discount rate of 17.5% was used to determine the recoverable amount of these non-current assets.

Financial Expenses and Revenues

Financial expenses for Q4 2017 amounted to \$1.0 million compared to \$1.4 million for the same period last year. The decrease in financial expenses of \$0.4 million is mainly due to lower imputed interest compared to last year.

Financial expenses for FY 2017 amounted to \$6.1 million compared to \$7.3 million for the same period last year. The decrease in financial expenses of \$1.2 million is mainly due to lower imputed interest and other interest expenses mitigated by unfavorable foreign exchange and derivatives when compared to last year.

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Income Taxes

The Company reported earnings before income taxes of \$0.6 million in Q4 2017 and \$12.5 million in FY 2017. Income tax recovery for Q4 2017 was \$1.6 million while income tax expense was \$0.5 million for FY 2017 compared to \$0.7 million and \$2.0 million for the same periods last year. These amounts were favorably impacted by deferred tax assets applicable in certain jurisdictions.

Liquidity and Capital Resources

	Q4 2017	Q4 2016	FY 2017	FY 2016
	\$	\$	\$	\$
Funds from operations ¹	5,398	5,256	26,336	12,486
Net changes in non-cash working capital items	(7,511)	(2,048)	(13,226)	10,978
Operating activities	(2,113)	3,208	13,110	23,464
Investing activities	137	(2,882)	(4,788)	(7,793)
Financing activities	807	946	884	(1)
Effect of foreign exchange rate changes on cash and cash equivalents	129	(218)	517	(185)
Net (decrease) increase in cash and cash equivalents	(1,040)	1,054	9,723	15,485

Cash used in operating activities amounted to \$2.1 million for Q4 2017 compared to cash generated of \$3.2 million for Q4 2016. The decrease is mainly due to negative variance from working capital changes. In FY 2017, cash provided by operating activities amounted to \$13.1 million compared to \$23.5 million in FY 2016 for the same reasons mentioned above mitigated by the increase in EBITDA¹. The negative change of non-cash working capital resulted mainly from an increase of \$10.3 million in inventory aimed at hedging commercial positions, and \$6.2 million in other current assets referring to an equity swap agreement.

In Q4 2017, cash generated by investing activities totaled \$0.1 million compared to cash used of \$2.9 million for Q4 2016. This increase is mainly explained by proceeds from the disposal of redundant PPE. For FY 2017, cash used in investing activities decreased for the same reasons mentioned above.

Cash provided by financing activities amounted to \$0.8 million in Q4 2017, compared to \$0.9 million in Q4 2016. In FY 2017, cash provided by financing activities amounted to \$0.9 million compared to \$nil in FY 2016. The increase is associated with the timing of contributions from a product development partnership program. At the end of FY 2017 and FY 2016, the Company had no drawdown under its credit facility.

Working Capital

	As at December 31, 2017	As at December 31, 2016
	\$	\$
Inventories	90,647	80,309
Other current assets	74,581	63,750
Current liabilities	(68,653)	(66,128)
Working capital¹	96,575	77,931
Working capital current ratio¹	2.41	2.18

The increase in working capital¹ compared to December 31, 2016 was mainly attributable to increase in cash and cash equivalents, higher inventory, as the Company is protecting specific commercial positions combined with an increase in other current assets to participate in an equity swap agreement in order to reduce earnings volatility.

¹ See Non-IFRS Measures

Management's Discussion and Analysis

Net Debt

	As at December 31, 2017	As at December 31, 2016
	\$	\$
Bank indebtedness	-	-
Long-term debt including current portion	271	325
Convertible debentures	48,768	43,157
Cross-currency swap	(3,602)	(189)
Total Debt	45,437	43,293
Cash and cash equivalents	(34,024)	(24,301)
Net Debt¹	11,413	18,992

Total debt, including the cross-currency swap, increased by \$2.1 million to \$45.4 million as at December 31, 2017, compared to \$43.3 million as at December 31, 2016.

Net debt¹, after considering cash and cash equivalents, decreased by \$7.6 million, from \$19.0 million as at December 31, 2016 to \$11.4 million as at December 31, 2017.

Available Short-Term Capital Resources

	As at December 31, 2017	As at December 31, 2016
	\$	\$
Cash and cash equivalents	34,024	24,301
Available bank indebtedness	1,530	1,438
Available revolving credit facility (reduced on February 18, 2016 as explained below)	52,998	52,635
Available short-term capital resources	88,552	78,374

In August 2014, the Company signed a senior secured multi-currency revolving credit facility of \$125.0 million maturing in August 2018, which was reduced to \$100.0 million as at June 30, 2015 and subsequently to \$50.0 million as at February 18, 2016.

At any time, the Company has the option to request that the credit facility be expanded through the exercise of an additional \$50.0 million accordion feature, subject to review and approval by the lenders. This revolving credit facility can be drawn in US dollars, Canadian dollars or Hong Kong dollars. Drawings bear interest at either the Canadian prime rate, US base rate, Hong Kong base rate or LIBOR, plus a margin based on the Company's senior consolidated debt to EBITDA¹ ratio. Under the terms of its credit facility, the Company is required to satisfy certain restrictive covenants as to financial ratios. During the first quarter of 2016, an amount of deferred costs of \$0.9 million was expensed and recorded in imputed interest and other interest expense. As at December 31, 2017, the Company had met all covenants.

In August 2014, the Company's subsidiary in Belgium entered into a bi-lateral credit facility of 5.0 million Euros, which was reduced to 2.5 million Euros as at February 18, 2016. This credit facility is coterminous with the new senior secured multi-currency revolving credit facility, and guaranteed by the same security pool. This bi-lateral facility can be drawn in Euros or US dollars and bears interest at similar rates as the revolving credit facility. No amount was used as at December 31, 2017 and 2016.

¹ See Non-IFRS Measures

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Share Information

	As at February 20, 2018	As at December 31, 2017
Issued and outstanding shares	83,904,791	83,901,041
Stock options potentially issuable	2,145,587	2,224,747
Convertible debentures potentially issuable	9,777,777	9,777,777

On February 21, 2017, the Toronto Stock Exchange ("TSX") 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 had 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. The Company's normal course issuer bid program that expired on October 10, 2017 was not renewed. For the year ended December 31, 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 applied against the equity. In the year ended December 31, 2016, the Company repurchased and cancelled 201,100 common shares at an average price of \$1.26 for a total amount of \$0.3 million applied against the equity.

Stock Option Plan

On April 11, 2011, the Company adopted a new stock option plan under which a maximum number of options granted cannot exceed 5,000,000. Options granted under the Stock Option Plan may be exercised during a period not exceeding ten years from the date of grant. The stock options outstanding as at December 31, 2017 may be exercised during a period not exceeding six years from their date of grant. Options vest at a rate of 25% (100% for directors) per year, beginning one year following the grant date of the options. Any unexercised options will expire one month after the date beneficiary ceases to be an employee, director or officer and one year for retired directors.

Restricted Share Unit and Performance Share Unit Plan

On November 4, 2015, the Company adopted a new Restricted Share Unit and Performance Share Unit ("PSU") Plan (the "New RSU & PSU Plan"). The New RSU & PSU Plan enables the Company to award eligible participants: (i) phantom RSUs that vest no later than three years following the grant date; and (ii) phantom PSUs that vest after certain periods of time, not exceeding three years, and subject to the achievement of certain performance criteria as determined by the Board of Directors. Such plan provides for the settlement of RSUs and PSUs through either cash or the issuance of common shares of the Company from treasury, for an amount equivalent to the volume weighted average of the trading price of the common shares of the Company on the TSX for the five trading days immediately preceding the applicable RSU vesting determination date or PSU vesting determination date.

For the year ended December 31, 2017, the Company granted 368,360 New RSUs (2016 – 1,245,000) and 37,500 New RSUs were cancelled (2016 – 20,000). As at December 31, 2017, 1,555,860 New RSUs were outstanding (2016 – 1,225,000).

For the year ended December 31, 2017, the Company granted nil PSUs (2016 – 500,000) and, as at December 31, 2017, 500,000 PSUs were outstanding (2016 – 500,000).

The following table presents information concerning all outstanding stock options:

	2017		2016	
	Number of options	Weighted average exercise price	Number of options	Weighted average exercise price
		CA\$		CA\$
Outstanding, beginning of year	2,860,648	2.63	1,558,345	3.74
Granted	288,000	1.75	1,445,000	1.65
Exercised	(597,500)	1.75	-	-
Cancelled	(116,476)	2.50	-	-
Expired	(209,925)	8.59	(142,697)	4.90
Outstanding, end of year	2,224,747	2.20	2,860,648	2.63
Exercisable, end of year	1,001,497	2.59	1,311,898	3.39

Management's Discussion and Analysis

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.

The following table reflects the contractual maturity of the Company's financial liabilities as at December 31, 2017:

	Carrying amount	1 year	2 years	3 years	Total
	\$	\$	\$	\$	\$
Trade and accrued liabilities	57,043	57,043	-	-	57,043
Long-term debt	271	271	-	-	271
Convertible debentures	48,768	3,170	50,474	-	53,644
Total	106,082	60,484	50,474	-	110,958

Commitments

The Company rents certain premises and equipment under the terms of operating leases. Future minimum payments excluding operating costs are as follows:

	2017	2016
	\$	\$
No later than 1 year	1,828	2,044
Later than 1 year but no later than 5 years	3,316	4,367
Later than 5 years	-	-
Total	5,144	6,411

As at December 31, 2017, in the normal course of business, the Company contracted letters of credit for an amount of \$0.4 million and \$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.

Management's Discussion and Analysis

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 fiscal year ended December 31, 2017 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.

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", this new IFRS standard is applicable by the Company no later than January 1, 2018. IFRS 15 will supersede current revenue recognition guidance including IAS 18 "Revenue" and IAS 11 "Construction Contracts". It applies to new contracts at the effective date and to existing contracts that are not yet completed at the effective date, January 1, 2018.

IFRS 15 is currently under review by the Company assessing its impact on the consolidated financial statements of fiscal year 2017, the assessment extending through fiscal year 2018. 5N Plus will adopt the "modified approach", whereby the cumulative effect will be recorded as an adjustment to the opening balance sheet or retained earnings on the effective date, rather than a retroactive restatement of prior periods. At this point in time, we are still finalizing our review.

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 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

Management's Discussion and Analysis

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.

Significant Management Estimation and Judgment in Applying Accounting Policies

The following are significant management judgments used in applying the accounting policies of the Company that have the most significant effect on the consolidated financial statements.

Estimation uncertainty

When preparing the consolidated financial statements, management undertakes a number of judgments, estimates and assumptions about recognition and measurement of assets, liabilities, revenues and expenses. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Information about the significant judgments, estimates and assumptions that have the most significant effect on the recognition and measurement of assets, liabilities, revenues and expenses are discussed below.

Impairment of non-financial assets

Non-financial assets are reviewed for an indication of impairment at each statement of financial position date upon the occurrence of events or changes in circumstances indicating that the carrying value of the assets may not be recoverable which requires significant judgement.

An impairment loss is recognized for the amount by which an asset's or cash-generating unit's carrying amount exceeds its recoverable amount, which is the higher of fair value less cost of disposal and value in use.

An intangible asset and related equipment that are not yet available for their intended use are tested for impairment at least annually, which also requires significant judgement. To determine the recoverable amount (fair value less cost to dispose of these assets), management estimates expected future cash flows from the asset and determines a suitable interest rate in order to calculate the present value of those cash flows. In the process of measuring expected future cash flows, management makes assumptions about future operating results using the estimated forecasted prices obtained from various market sources including publically available metals information as at December 31, 2017. These key assumptions relate to future events and circumstances. The actual results will vary and may cause adjustments to the Company's intangible and tangible assets in future periods.

By their nature, assets not yet available for intended use have a higher estimation uncertainty, as they depend on future market development and the Company's ability to commercialize and manufacture new products to realize forecasted earnings. For example new manufacturing processes may not be scalable to industrial level within expected timeframe and new products might not receive sufficient market penetration. Management believes that the following assumptions are the most susceptible to change and impact the valuation of these assets in time: a) expected significant growth of the market for different metal products (demand), b) selling prices which have an impact on revenues and metal margins (pricing), and c) the discount rate associated with new processes and products (after considering a premium over the Company's weighted average cost of capital (WACC) to reflect the additional uncertainty).

In most cases, determining the applicable discount rate involves estimating the appropriate adjustment to market risk and to asset specific risk factors. Assets not yet available for intended use have a higher estimation uncertainty, since they depend on future market information and the Company's ability to finish the project and realize the budgeted earnings. Management believes that the following assumptions are the most susceptible to change and therefore could impact the valuation of the assets in the next year: metal prices which have an impact on revenues and metal margins and the discount rate.

Management's Discussion and Analysis

Inventories

Inventories are measured at the lower of cost and net realizable value, with cost determined using the average cost method. In estimating net realizable values, management takes into account the most reliable evidence available at the time the estimates are made. The Company's core business is subject to changes in foreign policies and internationally accepted metal prices which may cause future selling prices to change rapidly. The Company evaluates its inventories using a group of similar items basis and considers expected future prices as well as events that have occurred between the consolidated statement of financial position date and the date of the completion of the consolidated financial statements. Net realizable value for inventory to satisfy a specific sales contract is measured at the contract price.

Debenture conversion option

The convertible debentures issued by the Company included conversion and early redemption options, which are considered as Level 3 financial instruments. The derivative is measured at fair value through profit or loss, and its fair value must be measured at each reporting period, with subsequent changes in fair value recorded in the consolidated statement of earnings (loss). A derivative valuation model is used, and includes assumptions to estimate the fair value. Detailed assumptions used in the model to determine the fair value of the embedded derivative, upon inception and as at December 31, 2017, are provided in note 12 of the 2017 consolidated financial statements of the Company.

Income taxes

The Company is subject to income taxes in numerous jurisdictions. Significant judgment is required in determining the worldwide provision for income taxes. There are many transactions and calculations for which the ultimate tax determination is uncertain. The Company recognizes liabilities for anticipated tax audit issues based on estimates of whether additional taxes will be due. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the current and deferred income tax assets and liabilities in the period in which such determination is made.

The Company has deferred income tax assets that are subject to periodic recoverability assessments. Realization of the Company's deferred income tax assets is largely dependent on its achievement of projected future taxable income and the continued applicability of ongoing tax planning strategies. The Company's judgments regarding future profitability may change due to future market conditions, changes in tax legislation and other factors that could adversely affect the ongoing value of the deferred income tax assets. These changes, if any, may require a material adjustment of these deferred income tax asset balances through an adjustment to the carrying value thereon in the future. This adjustment would reduce the deferred income tax asset to the amount that is considered to be more likely than not to be realized and would be recorded in the period such a determination was to be made. Refer to note 15 of the 2017 consolidated financial statements of the Company.

Related Party Transactions

The Company's related parties are its joint ventures, directors and executive members. Transactions with these related parties are described in Notes 8 and 23 in the 2017 consolidated financial statements of the Company.

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.

The fair value of the derivative financial instruments was as follows:

	2017	2016
	\$	\$
Debenture conversion option	-	(68)
Cross-currency swap	3,602	189
Equity swap agreement	6,141	-

Management's Discussion and Analysis

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 of the Company.

Interest Rate

Interest rate risk refers to the risk that future cash flows will fluctuate as a result of changes in market interest rates. The Company's policy is to limit its exposure to interest rate risk fluctuation by ensuring that a reasonable portion of its long-term debt and convertible debentures are at fixed rate. The Company is exposed to interest rate fluctuations on its revolving credit facility, which bears a floating interest rate. A 1% increase/decrease in interest rates would not have a significant impact on the Company's net earnings.

Foreign Currency

The Company's sales are primarily denominated in U.S. dollars whereas a portion of its operating costs are realized in local currencies, such as Euros and Canadian dollars. Even though the purchases of raw materials are denominated in U.S. dollars, which reduce to some extent exchange rate fluctuations, we are subject to currency translation risk which can negatively impact our results. Management has implemented a policy for managing foreign exchange risk against the relevant functional currency.

On December 7, 2015, the Company entered into cross-currency swap to hedge cash flows under the CA\$ convertible debentures, applying hedge accounting principles to the transaction. In addition, the Company will occasionally enter into foreign exchange forward contracts to sell US dollars in exchange for Canadian dollars and Euros. These contracts would hedge a portion of ongoing foreign exchange risk on the Company's cash flows since much of its non-US dollar expenses are incurred in Canadian dollars and Euros. The Company may also enter into foreign exchange contracts to sell Euros for US dollars. As at December 31, 2017, the Company has no foreign exchange contracts outstanding.

The following table summarizes in US dollar equivalents the Company's major currency exposures as at December 31, 2017:

	CA\$	EUR	GBP	RMB	Other
	\$	\$	\$	\$	\$
Cash and cash equivalents	660	2,877	2,090	1,396	682
Accounts receivable	438	8,335	81	3,089	1,094
Other current assets	6,141	-	-	-	-
Trade and accrued liabilities	(10,600)	(8,369)	(775)	(2,298)	(1,289)
Long-term debt	(271)	-	-	-	-
Net financial assets (liabilities)	(3,632)	2,843	1,396	2,187	487

The following table shows the impact on earnings before income tax of a five-percentage point strengthening or weakening of foreign currencies against the US dollar as at December 31, 2017 for the Company's financial instruments denominated in non-functional currencies:

	CA\$	EUR	GBP	RMB	Other
	\$	\$	\$	\$	\$
5% Strengthening	(182)	142	70	109	24
5% Weakening	182	(142)	(70)	(109)	(24)

Credit

Credit risk refers to the possibility that a customer or counterparty will fail to fulfill its obligations under a contract and, as a result, create a financial loss for the Company. The Company has a credit policy that defines standard credit practice. This policy dictates that all new customer accounts be reviewed prior to approval and establishes the maximum amount of credit exposure per customer. The creditworthiness and financial well-being of the customer are monitored on an ongoing basis.

Management's Discussion and Analysis

The Company establishes an allowance for doubtful accounts as determined by management based on its assessment of recoverability; therefore, the carrying amount of accounts receivable generally represents the maximum credit exposure. As at December 31, 2017 and 2016, the Company had an allowance for doubtful accounts of \$0.1 million. The provision for doubtful accounts, if any, is included in selling, general and administrative expenses in the consolidated statement of earnings (loss), and is net of any recoveries that were provided for in prior periods.

Liquidity

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they come due. The Company manages liquidity risk through the management of its capital structure. It also manages liquidity risk by continually monitoring actual and projected cash flows, taking into account the Company's sales and receipts and matching the maturity profile of financial assets and financial liabilities. The Board of Directors reviews and approves the Company's annual operating and capital budgets as well as any material transactions out of the ordinary course of business, including proposals on acquisitions and other major investments. Under the terms of its credit facility, the Company is required to satisfy certain restrictive covenants. In order to comply with these covenants, the Company will need to execute on its EBITDA and cash flow estimates. Management believes that the assumptions used by the Company in preparing its estimates are reasonable. However, risk remains. Successful achievement of these estimates results is dependent on stability in the price of metals and other raw materials, the reduction of debt due to the optimization of the Company's working capital and the continued viability and support of the Company's banks.

Risk and Uncertainties

We are subject to a number of risk factors which may limit our ability to execute our strategy and achieve our long-term growth objectives. Management analyses these risks and implements strategies in order to minimize their impact on the Company's performance.

Risks Associated with our Growth Strategy

5N Plus' strategic plan is designed to enhance profitability while reducing earnings volatility and is founded on three pillars of growth: first, optimizing balance of contribution from upstream and downstream activities; second, extracting more value from core businesses and global asset; and third, delivering quality growth from both existing growth initiatives and future M&A opportunities. There is a risk that some of the expected benefits will fail to materialize, or may not occur within the time periods anticipated by management. The realization of such benefits may be affected by a number of factors, many of which are beyond our control.

International Operations

We operate in a number of countries, including China and Laos, and, as such, face risks associated with international business activities. We could be significantly affected by such risks, which include the integration of international operations, challenges associated with dealing with numerous legal and tax systems, the potential for volatile economic and labor conditions, political instability, foreign exchange, expropriation, changes in taxes, and other regulatory costs. Although we operate primarily in countries with relatively stable economic and political climates, there can be no assurance that our business will not be adversely affected by the risks inherent in international operations.

International Trade Regulations

We do business in a number of countries from various locations, as such, face risks associated with changes to International trade regulations and policies. Such risks, included but are not limited to, barriers to or restrictions on free trade, changes in taxes, tariffs and other regulatory costs. Although we operate primarily in countries, with proximity to our clients and suppliers, and with relatively stable economic and political climates, there can be no assurance that our business will not be adversely affected by the risks inherent to the changing international political landscape and its impact on global trade.

Environmental Regulations

Our operations involve the use, handling, generation, processing, storage, transportation, recycling and disposal of hazardous materials and are subject to extensive environmental laws and regulations at the national, provincial, local and international level. These environmental laws and regulations include those governing the discharge of pollutants into the air and water, the use, management and disposal of hazardous materials and wastes, the clean-up of contaminated sites and occupational health and safety. We have incurred and will continue to incur capital expenditures in order to

Management's Discussion and Analysis

comply with these laws and regulations. In addition, violations of, or liabilities under, environmental laws or permits may result in restrictions being imposed on our operating activities or in our being subject to substantial fines, penalties, criminal proceedings, third party property damage or personal injury claims, clean-up costs or other costs. While we believe that we are currently in compliance with applicable environmental requirements, future developments such as more aggressive enforcement policies, the implementation of new, more stringent laws and regulations, or the discovery of currently unknown environmental conditions may require expenditures that could have a material adverse effect on our business, results of operations and financial condition.

Competition

We are the leading producer of specialty metal and chemical products and have a limited number of competitors, few of which are as fully integrated as we are or have a similar range of products. Accordingly, they have limitation to provide the same comprehensive set of services and products as we do. However, there can be no guarantee that this situation will continue in the future and competition could arise from new low-cost metal refiners or from certain of our customers who could decide to backward integrate. Greater competition could have an adverse effect on our revenues and operating margins if our competitors gain market share and we are unable to compensate for the volume lost to our competition.

Commodity Price

The price we pay for, and availability of, various inputs fluctuates due to numerous factors beyond our control, including economic conditions, currency exchange rates, global demand for metal products, trade sanctions, tariffs, labor costs, competition, over capacity of producers and price surcharges. Fluctuations in availability and cost of inputs may materially affect our business, financial condition, results of operations and cash flows. To the extent that we are not able to pass on any increases, our business, financial condition, results of operations and cash flows may be materially adversely affected.

Sources of Supply

We may not be able to secure the critical raw material feedstock on which we depend for our operations. We currently procure our raw materials from a number of suppliers with whom we have had long-term commercial relationships. The loss of any one of these suppliers or a reduction in the level of deliveries to us may reduce our production capacity and impact our deliveries to customers. This would in turn negatively impact our sales, net margins and may lead to liabilities with respect to some of our supply contracts.

Protection of Intellectual Property

Protection of our proprietary processes, methods and other technologies is important to our business. We rely almost exclusively on a combination of trade secrets and employee confidentiality agreements to safeguard our intellectual property. We have deliberately chosen to limit our patent position to avoid disclosing valuable information. Failure to protect and monitor the use of our existing intellectual property rights could result in the loss of valuable technologies and processes.

Inventory Price

We monitor the risks associated with the value of our inventories in relation to the market price of such inventories. Because of the highly illiquid nature of many of our inventories, we rely on a combination of standard risk measurement techniques, such as value at risk as well as a more empirical assessment of the market conditions. Decisions on appropriate physical stock levels are taken by considering both the value at risk calculations and the market conditions.

Business Interruptions

We may incur losses resulting from business interruptions. In many instances, especially those related to our long-term contracts, we have contractual obligations to deliver product in a timely manner. Any disruption in our activities which leads to a business interruption could harm our customers' confidence level and lead to the cancellation of our contracts and legal recourse against us. Although we believe that we have taken the necessary precautions to avoid business interruptions and carry business interruption insurance, we could still experience interruptions which would adversely impact our financial results.

Management's Discussion and Analysis

Dependence on Key Personnel

We rely on the expertise and know-how of its personnel to conduct our operations. The loss of any member of our senior management team could have a material adverse effect on us. Our future success also depends on our ability to retain and attract our key employees, train, retain and successfully integrate new talent into our management and technical teams. Recruiting and retaining talented personnel, particularly those with expertise in the specialty metals industry and refining technology is vital to our success and may prove difficult. We cannot provide assurance that we will be able to attract and retain qualified personnel when needed.

Collective Agreements

A portion of our workforce is unionized and we are party to collective agreements that are due to expire at various times in the future. If we are unable to renew these collective agreements on similar terms as they become subject to renegotiation from time to time, this could result in work stoppages or other labour disturbances, such as strikes, walkouts or lock-outs, potentially affecting our performance.

Risks Associated with Public Issuer Status

Our shares are publicly traded and, as such, we are subject to all of the obligations imposed on "reporting issuers" under applicable securities laws in Canada and all of the obligations applicable to a listed company under stock exchange rules. Another risk associated with a public issuer status is the disclosure of key Company information as compared to privately owned competitors.

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, 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 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 (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.

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.

Management's Discussion and Analysis

Selected Quarterly Financial Information

(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	Mar. 31, 2016
	\$	\$	\$	\$	\$	\$	\$	\$
Revenue	52,492	50,325	56,229	60,870	54,704	55,491	57,435	63,868
EBITDA ¹	4,420	6,427	6,341	9,675	4,803	2,066	5,358	2,884
Adjusted EBITDA ¹	6,051	6,155	6,839	6,072	4,331	6,816	4,714	4,250
Net earnings (loss) attributable to equity holders of 5N Plus	2,229	2,224	3,416	4,154	158	(4,232)	86	(1,907)
Basic earnings (loss) per share attributable to equity holders of 5N Plus	\$0.03	\$0.03	\$0.04	\$0.05	\$-	(\$0.05)	\$-	(\$0.02)
Net earnings (loss)	2,222	2,223	3,415	4,153	158	(4,232)	87	(1,909)
Basic earnings (loss) per share	\$0.03	\$0.03	\$0.04	\$0.05	\$-	(\$0.05)	\$-	(\$0.02)
Diluted earnings (loss) per share	\$0.03	\$0.03	\$0.04	\$0.05	\$-	(\$0.05)	\$-	(\$0.02)
Adjusted net earnings (loss) ¹	3,361	1,994	3,647	1,602	148	2,298	45	(653)
Basic adjusted net earnings (loss) per share ¹	\$0.04	\$0.02	\$0.04	\$0.02	\$-	\$0.03	\$-	(\$0.01)
Funds from operations ¹	5,398	4,263	7,945	8,730	5,256	238	4,521	2,471
Backlog ¹	187 days	178 days	135 days	128 days	136 days	148 days	157 days	145 days

Selected Yearly Financial Information

As at and for the years ended December 31 (in thousands of United States dollars except per share amounts)	2017	2016	2015
	\$	\$	\$
Revenue	219,916	231,498	311,012
EBITDA	26,863	15,111	(54,696)
Adjusted EBITDA	25,117	20,011	3,959
Net earnings (loss) attributable to equity holders of 5N Plus	12,023	(5,895)	(97,198)
Basic earnings (loss) per share attributable to equity holders of 5N Plus	\$0.14	(\$0.07)	(\$1.16)
Net earnings (loss)	12,013	(5,896)	(97,201)
Basic earnings (loss) per share	\$0.14	(\$0.07)	(\$1.16)
Diluted earnings (loss) per share	\$0.14	(\$0.07)	(\$1.16)
Adjusted net earnings (loss)	10,604	1,838	(27,215)
Basic adjusted net earnings (loss) per share	\$0.13	\$0.02	(\$0.32)
Funds from (used in) operations	26,336	12,486	(9,851)
Backlog	187 days	136 days	158 days
Balance Sheet			
Total assets	244,932	219,057	220,737
Total non-current liabilities	70,851	64,415	78,335
Net debt ¹	11,413	18,992	34,862
Shareholders' equity	105,446	88,522	96,632

¹ See Non-IFRS Measures

Management's Discussion and Analysis

Metal Prices

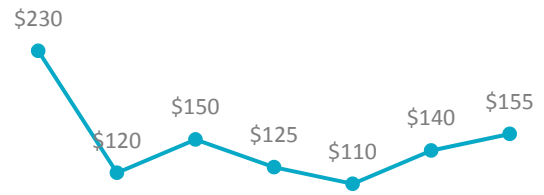
(in U.S. dollars per kilo)

Bismuth



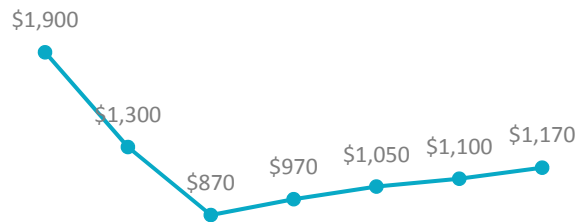
DEC 2014 DEC 2015 DEC 2016 MAR 2017 JUNE 2017 SEPT 2017 DEC 2017

Gallium



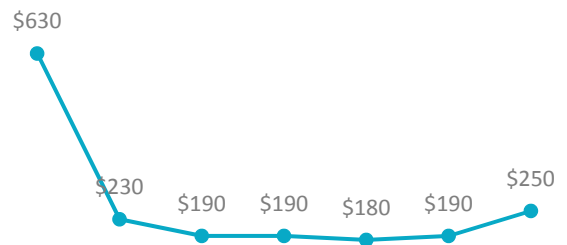
DEC 2014 DEC 2015 DEC 2016 MAR 2017 JUNE 2017 SEPT 2017 DEC 2017

Germanium



DEC 2014 DEC 2015 DEC 2016 MAR 2017 JUNE 2017 SEPT 2017 DEC 2017

Indium



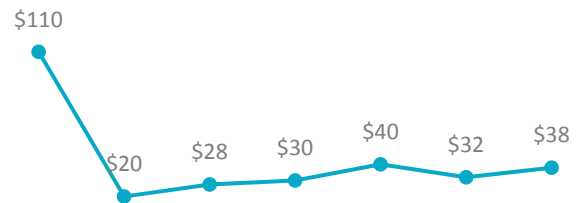
DEC 2014 DEC 2015 DEC 2016 MAR 2017 JUNE 2017 SEPT 2017 DEC 2017

Selenium



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Tellurium



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