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MANAGEMENT REPORT

QUARTER ENDED DECEMBER 31, 2018

5N PLUS

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, 2018. 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 26, 2019, 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 2018" and "Q4 2017" refer to the three-month periods ended December 31, 2018 and 2017 respectively, and "FY 2018" and "FY 2017" refer to the years ended December 31, 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" and "Selected Yearly Financial Information" sections.

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 associated with our growth strategy, credit, liquidity, interest rate, litigation, 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 including China, 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 26, 2019. 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 global producer of engineered materials and specialty chemicals with integrated recycling and refining assets to manage the sustainability of its business model. The Company is headquartered in Montreal, Québec, Canada and operates R&D, manufacturing and commercial centers in several locations in Europe, the Americas and Asia. 5N Plus deploys a range of proprietary and proven technologies to produce products which are used as enabling precursors by its customers in a number of advanced electronics, optoelectronics, pharmaceutical, health, renewable energy and industrial applications. Many of the materials produced by 5N Plus are critical for the functionality and performance of the products and systems produced by its customers, many of whom are leaders within their industry.

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, financial information and 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[1] 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 products which are used in a number of applications such as security, aerospace, sensing, imaging, renewable energy and various technical industries. Typical end markets include photovoltaics (terrestrial and spatial solar energy), advance electronics, optoelectronics, electronic packaging, medical imaging and thermoelectric. 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.

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. The Eco-Friendly Materials segment operates in North America, Europe and Asia. The Eco-Friendly Materials segment manufactures and sells products which are used in a number of applications such as pharmaceutical, healthcare, animal feed additive, catalytic and extractive, as well as various industrial materials. Main products are sold either in elemental or alloyed form but mostly in the form of specialized chemicals. Revenues and earnings associated with recycling services and activities provided to customers of the Eco-Friendly Materials segment are also included in the Eco-Friendly Materials segment.

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 2018 and Fiscal Year 2018
Reaching midpoint of 5N21 and delivering results ahead of plan

Fiscal year 2018 was the third year in which 5N Plus grew its earnings. This performance was delivered despite unfavorable movement of metal notations associated with the Company's business throughout 2018 as compared to stable or favorable movement of the same notations in 2016 and 2017. The Company's performance in 2018 is a clear proof that the new business model is delivering on its commitments and the Company is well on track to deliver 5N21 targets.

During 2018, the demand for the Company's products remained strong and the diversity of the markets in which 5N Plus participates remained an asset. During the same period, the Company continued to invest on its growth initiatives which aim to further improve quality and sustainability of the Company's earnings. Moreover, in 2018, 5N Plus remained somewhat unaffected by the trade and tariff related themes mainly due to the positioning of its assets, with emphasis on local entities supporting local markets and optimizing the Company's supply chain to become more diverse and agile.

- During the year, Adjusted EBITDA[1] and EBITDA[1] reached $32.4 million and $29.0 million, compared to $29.6 million and $26.9 million in 2017. This performance reflects strong demand for our products, improved product mix and tangible reduction in earnings volatility.
- The Adjusted EBITDA and EBITDA for the fourth quarter reached $6.9 million and $5.6 million in 2018 compared to $6.8 million and $4.4 million in 2017. The fourth quarter results are historically marked by cyclical pattern.
- Net earnings for the year 2018 reached $14.0 million or $0.17 per share, compared to $12.0 million or $0.14 per share for the year 2017, the highest level reached in recent years.
- Revenue in 2018 reached $218.0 million compared to $220.0 million in 2017. The lower sales figure is mainly driven by the lower sales of lower margin products with high content of metal and lower pass-through revenue from metals which are used as consumables in the Company's products. Consistent with the Company's strategic plan, over the past three years, the amount of metals utilized in the Company's products have reduced markedly which in turn has reduced earnings volatility considerably.
- Return on Capital Employed (ROCE)[1] reached 15.1% in 2018, similar to 2017, while compared to 8.2% in 2016 reflecting the overall margin expansion associated with the Company's products and services, and better management of capital employed.
- Net debt[1] stood at $22.2 million as at December 31, 2018 from $11.4 million for the same period last year, impacted by working capital, more specifically due to a decrease in trade and accrued liabilities and an increase in inventory aimed at hedging commercial positions.
- Backlog[1] reached as at December 31, 2018 a level of 217 days of sales outstanding, higher than previous quarter, and last year ending at a level of 187 days. Bookings[1] in Q4 2018 reached 105 days compared to 86 days in Q3 2018 and 108 days in Q4 2017.
- In Q4 2018, 5N Plus completed the construction of its high purity additive plant in Germany on time and in line with the budget envelop of its strategic plan. During the same period, the commissioning of the plant began with the aim to commence certification and qualification campaigns in early 2019.
- On April 11, 2018, 5N Plus announced expansion of capacity and capability in its upstream activities across South East Asia and Europe to further enhance the Company's competitive access to specialty metals.
- On April 24, 2018, 5N Plus announced the closing of a $79.0 million senior secured multi-currency revolving syndicated credit facility. Subject to lenders' approval, 5N Plus can exercise its option to request an expansion of the credit facility through a $30.0 million accordion feature which would increase the total size of the facility to $109.0 million.

[1] See Non-IFRS Measures

- On April 30, 2018, 5N Plus announced that it has secured a series of multi-year contracts for the supply of semiconductor materials and ancillary services associated with the manufacturing of thin film photovoltaic (PV) modules by First Solar, Inc.
- On May 2, 2018, 5N Plus announced the nomination of Mr. Donald F. Osborne with over 30 years of experience in Satellite Communications, Space and Defence, as a Director of 5N Plus.
- On July 3, 2018, 5N Plus announced partial redemption of its 5.75% convertible unsecured subordinated debentures maturing on June 30, 2019, redeeming debentures in an aggregate principal amount of CA$40.0 million.
- On July 31, 2018, 5N Plus announced that it is doubling the capacity of its ultra-high purity Semiconductor plant located on its Montreal campus to enable its Electronic Materials division to satisfy the growing demand for the Company's specialty semiconductor materials.
- On February 6, 2019, 5N Plus announced the closing of a $25.0 million unsecured subordinated term loan with Investissement Québec.
- On February 11, 2019, 5N Plus announced that at a special meeting of its shareholders held in Montreal, Quebec, shareholders approved that the stated capital of the common shares of 5N Plus be reduced to $5.0 million and the amount of the reduction be added to the contributed surplus of the Company pursuant to Section 38(1) of the Canada Business Corporation Act, providing more flexibility to pay dividends and repurchase common shares.
- On February 20, 2019, 5N Plus announced that its U.S. based subsidiary, 5N Plus Semiconductors, has been awarded a multi-year program to supply opto-electronic semiconductor substrates to Albuquerque, New Mexico based SolAero Technologies. The substrates are intended for use in satellite solar arrays for a number of applications, including powering a constellation of several hundred low-orbit broadband satellites being manufactured by Airbus OneWeb Satellites. This network of satellites will provide global, persistent, low latency internet access that promises to bridge the digital divide.
- On February 25, 2019, 5N Plus announced that it has exercised its right to redeem all of its outstanding 5.75% convertible unsecured subordinated debentures maturing on June 30, 2019. On March 28, 2019 the Company will redeem the debentures in an aggregate principal amount of CA$26 million.

With the closing of 2018 fiscal year, the Company has reached the midpoint milestone of its strategic plan 5N21. The basic premise of this plan has been to significantly reduce 5N Plus' earnings volatility attributed to the fluctuations in commodity markets while growing the Company's profitability and enhancing return on capital employed. Over the past two years, Adjusted EBITDA[1] has grown by 45% while return on capital employed has nearly doubled. Moreover, 2018 provided an opportunity to test the Company's progress with respect to reducing earnings volatility stemmed from adverse changes in the metal markets. During the year, nearly all notations associated with metals utilized by 5N Plus as consumables experienced unfavorable movement. Accounting for this and the fact that the same notations moved favorably in 2017, the growth in Adjusted EBITDA as compared to 2017 is a clear sign that the new business model is working. Also, these results confirm that 5N Plus is well on track to deliver two of the three goals defined by its strategic plan, namely $45.0 million Adjusted EBITDA and 17% ROCE by 2021. As with the third goal of reducing earnings volatility by 50%, the Company has achieved this objective nearly a year earlier than anticipated.

[1] See Non-IFRS Measures

Summary of Results

	Q4 2018	Q4 2017	FY 2018	FY 2017
	$	$	**$**	$
Revenue	**47,710**	52,492	**217,995**	219,916
Adjusted operating expenses[1] *	**(40,798)**	(45,729)	**(185,645)**	(190,329)
Adjusted EBITDA[1]	**6,912**	6,763	**32,350**	29,587
Impairment of inventory	**-**	-	**-**	-
Share-based compensation expense	**(721)**	(712)	**(3,298)**	(4,470)
Litigation and restructuring (costs) income	**(766)**	(415)	**(316)**	2,953
Gain on disposal of property, plant and equipment (PPE)	**-**	1,497	**510**	1,887
Impairment of non-current assets	**-**	(3,100)	**-**	(3,100)
Change in fair value of debenture conversion option	**-**	67	**-**	85
Foreign exchange and derivative gain (loss)	**164**	320	**(225)**	(79)
EBITDA[1]	**5,589**	4,420	**29,021**	26,863
Interest on long-term debt, imputed interest and other interest expense	**886**	1,372	**6,295**	6,097
Depreciation and amortization	**2,469**	2,434	**8,810**	8,226
Earnings before income taxes	**2,234**	614	**13,916**	12,540
Income tax (recovery) expense				
Current	**(2,955)**	243	**848**	3,595
Deferred	**1,143**	(1,851)	**(904)**	(3,068)
	(1,812)	(1,608)	**(56)**	527
Net earnings	**4,046**	2,222	**13,972**	12,013
Basic earnings per share	**$0.05**	$0.03	**$0.17**	$0.14
Diluted earnings per share	**$0.05**	$0.03	**$0.17**	$0.14

**Excluding share-based compensation expense, litigation and restructuring income, gain on disposal of property, plant and equipment, impairment of non-current assets and depreciation and amortization.*

Revenue by Segment and Gross Margin

	Q4 2018	Q4 2017	Change	FY 2018	FY 2017	Change
	$	$		**$**	$	
Electronic Materials	**19,368**	17,917	8%	**81,014**	73,448	10%
Eco-Friendly Materials	**28,342**	34,575	(18%)	**136,981**	146,468	(6%)
Total revenue	**47,710**	52,492	(9%)	**217,995**	219,916	(1%)
Cost of sales	**(37,916)**	(41,035)	(8%)	**(169,061)**	(170,514)	(1%)
Depreciation on PPE	**2,256**	2,363	(5%)	**7,962**	7,908	1%
Gross margin[1]	**12,050**	13,820	(13%)	**56,896**	57,310	(1%)
Gross margin percentage[1]	**25.3%**	26.3%		**26.1%**	26.1%	

During Q4 2018 and FY 2018, revenue decreased by 9% and 1% respectively compared to the same periods of 2017. Gross margin reached 25.3% in Q4 2018 compared to 26.3% in Q4 2017, tracking an average gross margin of 26.1% for both years, or $56.9 million in 2018 compared to $57.3 million in 2017. Both revenue and gross margin were negatively impacted by adverse movements in the underlying metal notations, especially in the second half of 2018. The stability of revenue and gross margin in 2018, despite adverse impacts from the commodity markets, is congruent with the Company's new business model under its strategic plan to reduce earnings volatility from notable movements in the metal notations.

[1] See Non-IFRS Measures

Operating earnings, EBITDA and Adjusted EBITDA

	Q4 2018	Q4 2017	Change	FY 2018	FY 2017	Change
	$	$		**$**	$	
Electronic Materials	**7,142**	5,642	27%	**29,226**	24,835	18%
Eco-Friendly Materials	**1,115**	3,667	(70%)	**12,517**	14,976	(16%)
Corporate	**(1,345)**	(2,546)	47%	**(9,393)**	(10,224)	8%
Adjusted EBITDA[1]	**6,912**	6,763	2%	**32,350**	29,587	9%
EBITDA[1]	**5,589**	4,420	26%	**29,021**	26,863	8%
Operating earnings	**2,956**	1,599	85%	**20,436**	18,631	10%

In Q4 2018, Adjusted EBITDA[1] was $6.9 million compared to $6.8 million in Q4 2017. In FY 2018, Adjusted EBITDA increased by $2.8 million, from $29.6 million in FY 2017 to $32.4 million, supported by a favorable sales mix, strong product demand and overall performance of operating activities.

In Q4 2018, EBITDA[1] was $5.6 million compared to $4.4 million in Q4 2017. In FY 2018, EBITDA was $29.0 million compared to $26.9 million in FY 2017. The improvement in FY 2018 is mainly due to the increase in Adjusted EBITDA mentioned above combined with lower shared-based compensation expense and less significant one-time items recorded in the current period.

Operating earnings in Q4 2018 were $3.0 million compared to $1.6 million in Q4 2017 and $20.4 million in FY 2018 compared to $18.6 million in FY 2017.

Electronic Materials Segment
Adjusted EBITDA in Q4 2018 increased by $1.5 million to $7.1 million representing an Adjusted EBITDA margin[1] of 37% compared to 31% in Q4 2017. Adjusted EBITDA increased by $4.4 million to $29.2 million in FY 2018 representing an Adjusted EBITDA margin of 36% compared to 34% in FY 2017.

Eco-Friendly Materials Segment
Adjusted EBITDA decreased by $2.6 million representing an Adjusted EBITDA margin of 4% in Q4 2018 compared to 11% in Q4 2017. Adjusted EBITDA decreased by $2.5 million representing an Adjusted EBITDA margin of 9% in FY 2018 compared to 10% in FY 2017. The figures in both periods were adversely impacted by the decrease in the underlying metal notations. The Company's strategic plan has significantly reduced the impact of earnings volatility due to fluctuations in the metal markets. The structure of contracts in this segment makes it nearly impossible to completely eliminate such volatility.

Net Earnings and Adjusted Net Earnings

	Q4 2018	Q4 2017	FY 2018	FY 2017
	$	$	**$**	$
Net earnings	**4,046**	2,222	**13,972**	12,013
Basic earnings per share	**$0.05**	$0.03	**$0.17**	$0.14
Reconciling items:				
Share-based compensation expense	**721**	712	**3,298**	4,470
Accelerated imputed interest	**-**	-	**1,490**	-
Litigation and restructuring costs (income)	**766**	415	**316**	(2,953)
Gain on disposal of PPE	**-**	(1,497)	**(510)**	(1,887)
Impairment of non-current assets	**-**	3,100	**-**	3,100
Change in fair value of debenture conversion option	**-**	(67)	**-**	(85)
Income tax expense on taxable items above	**(126)**	(1,001)	**(1,082)**	(769)
Adjusted net earnings [1]	**5,407**	3,884	**17,484**	13,889
Basic adjusted net earnings per share[1]	**$0.06**	$0.05	**$0.21**	$0.17

[1] See Non-IFRS Measures

Net earnings reached $4.0 million or $0.05 per share in Q4 2018 compared to $2.2 million or $0.03 per share in Q4 2017. Adjusted net earnings[1] increased by $1.5 million and reached $5.4 million in Q4 2018, compared to $3.9 million in Q4 2017. Excluding the income tax expense, the main items reconciling the Adjusted net earnings in Q4 2018 are the share-based compensation expense and litigation and restructuring costs.

In FY 2018, net earnings reached $14.0 million or $0.17 per share compared to $12.0 million or $0.14 per share in FY 2017. Adjusted net earnings increased by $3.6 million and reached $17.5 million compared to $13.9 million in FY 2017. Excluding the income tax expense, the main items reconciling the Adjusted net earnings in FY 2018 are the share-based compensation expense, the litigation and restructuring costs, 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[1]			BOOKINGS[1]		
	Q4 2018	Q3 2018	Q4 2017	**Q4 2018**	Q3 2018	Q4 2017
	$	$	$	**$**	$	$
Electronic Materials	**61,771**	62,175	59,705	**18,964**	22,409	20,032
Eco-Friendly Materials	**51,493**	43,830	47,681	**36,005**	28,060	41,922
Total	**113,264**	106,005	107,386	**54,969**	50,469	61,954

	BACKLOG[1]			BOOKINGS[1]		
(number of days based on annualized revenues) *	**Q4 2018**	Q3 2018	Q4 2017	**Q4 2018**	Q3 2018	Q4 2017
Electronic Materials	**291**	289	304	**89**	104	102
Eco-Friendly Materials	**166**	118	126	**116**	76	111
Weighted average	**217**	181	187	**105**	86	108

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

Q4 2018 vs Q3 2018

Backlog[1] as at December 31, 2018 reached a level of 217 days of annualized revenue, representing an increase of 36 days compared to the previous quarter.

Backlog as at December 31, 2018 for the Electronic Materials segment represented 291 days of annualized segment revenue, an increase of 2 days over the backlog ended September 30, 2018. The backlog for the Eco-Friendly Materials segment represented 166 days of annualized segment revenue, an increase of 48 days or 41% over the backlog ended September 30, 2018.

Bookings[1] for the Electronic Materials segment decreased by 15 days, from 104 days in Q3 2018 to 89 days in Q4 2018. Bookings for the Eco-Friendly Materials segment increased by 40 days, from 76 days in Q3 2018 to 116 days in Q4 2018.

Q4 2018 vs Q4 2017

Backlog as at December 31, 2018 for the Electronic Materials segment decreased by 13 days and increased by 40 days for the Eco-Friendly Materials segment compared to December 31, 2017.

Bookings decreased by 13 days for the Electronic Materials segment and increased by 5 days for the Eco-Friendly Materials segment compared to the previous year quarter.

[1] See Non-IFRS Measures

Expenses

	Q4 2018	Q4 2017	FY 2018	FY 2017
	$	$	**$**	$
Depreciation and amortization	**2,469**	2,434	**8,810**	8,226
SG&A	**4,713**	6,678	**23,940**	26,220
Share-based compensation expense	**721**	712	**3,298**	4,470
Litigation and restructuring costs (income)	**766**	415	**316**	(2,953)
Impairment of non-current assets	**-**	3,100	**-**	3,100
Financial expenses	**722**	985	**6,520**	6,091
Income tax (recovery) expense	**(1,812)**	(1,608)	**(56)**	527
Total expenses	**7,579**	12,716	**42,828**	45,681

Depreciation and Amortization

Depreciation and amortization expenses in Q4 2018 and FY 2018 amounted to $2.5 million and $8.8 million respectively, compared to $2.4 million and $8.2 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

For Q4 2018 and FY 2018, SG&A expenses were $4.7 million and $23.9 million respectively, compared to $6.7 million and $26.2 million for the same periods of 2017, positively impacted by various initiatives to control the overhead expenses.

Share-Based Compensation Expense

Share-based compensation expense in Q4 2018 and FY 2018 amounted to $0.7 million and $3.3 million, compared to $0.7 million and $4.5 million for the same periods of 2017. The decrease in FY 2018 is mainly due to the important rise in the Company's share price during the second and third quarter of 2017.

Litigation and Restructuring Costs (Income)

In Q4 2018, the Company recorded litigation and restructuring costs of $0.8 million related to severance costs associated with workforce optimization initiatives implemented throughout the year, in line with our strategic plan. In addition, 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.

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, an initiative announced in 2016. 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.

Impairment of non-current assets

No impairment of non-current assets was recognized in Q4 2018 and for FY 2018. 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 million 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 was from an active decision to alter the market penetration strategy, other factors remaining constant. It was 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

Financial expenses for Q4 2018 amounted to $0.7 million compared to $1.0 million for the same period last year. The decrease in financial expenses of $0.3 million is mainly due to the favorable cost of gross debt resulting from the partial redemption of the convertible unsecured subordinated debentures in Q2 2018 using the Company's senior credit facility.

Financial expenses in FY 2018 amounted to $6.5 million compared to $6.1 million in the same period last year. The increase in financial expenses of $0.4 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 the lower cost associated with the drawdown on the senior credit facility as well as lower imputed interest on the outstanding debentures during Q3 and Q4 2018. In FY 2018, no charge related to the fair value of the debenture conversion option was recognized while in FY 2017 a minimal favorable charge was recognized.

Income Taxes

The Company reported earnings before income taxes of $2.2 million in Q4 2018 and $13.9 million in FY 2018. Income tax recovery in Q4 2018 was $1.8 million and $0.1 million in FY 2018 compared to $1.6 million and an income tax expense of $0.5 million in the same periods last year. These amounts were favorably impacted by deferred tax assets applicable in certain jurisdictions as well as adjustment in respect of prior years where the outcome was different than initially estimated.

Liquidity and Capital Resources

	Q4 2018	Q4 2017	**FY 2018**	FY 2017
	$	$	**$**	$
Funds from operations[1]	**8,641**	5,398	**28,643**	26,336
Net changes in non-cash working capital items	**(5,374)**	(7,511)	**(26,448)**	(13,226)
Operating activities	**3,267**	(2,113)	**2,195**	13,110
Investing activities	**(3,085)**	137	**(9,754)**	(4,788)
Financing activities	**(26)**	807	**693**	884
Effect of foreign exchange rate changes on cash and cash equivalents	**(231)**	129	**(434)**	517
Net (decrease) increase in cash and cash equivalents	**(75)**	(1,040)	**(7,300)**	9,723

Cash generated by operating activities amounted to $3.3 million in Q4 2018 compared to cash used of $2.1 million in Q4 2017. In FY 2018, cash provided by operating activities amounted to $2.2 million compared to $13.1 million in FY 2017. The negative change in non-cash working capital in FY 2018 resulted mainly from a decrease in trade and accrued liabilities of $21.3 million combined with an increase of $6.2 million in inventory aimed at hedging commercial positions.

In Q4 2018, cash used in investing activities totaled $3.1 million compared to cash generated of $0.1 million in Q4 2017. This decrease is mainly explained by proceeds from the disposal of redundant PPE in Q4 2017. In FY 2018, cash used in investing activities increased by $5.0 million explained by higher investment in PPE and less proceeds from disposal of redundant PPE.

No net cash was generated or used from financing activities in Q4 2018 compared to cash provided of $0.8 million in Q4 2017. In FY 2018, cash provided by financing activities amounted to $0.7 million compared to $0.9 million in FY 2017. The decrease is associated with the timing of contributions 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 mitigated by more cash from issuance of common share, while in YTD 2017, the Company had repurchased a certain number of shares under the common share repurchase program which ended in October 2017.

[1] See Non-IFRS Measures

Working Capital

	As at December 31, 2018	As at December 31, 2017
	$	$
Inventories	**96,889**	90,647
Other current assets	**62,396**	74,581
Current liabilities	**(65,924)**	(68,653)
Working capital[1]	**93,361**	96,575
Working capital current ratio[1]	**2.42**	2.41

The decrease in working capital[1] compared to December 31, 2017 was mainly attributable to decrease in cash and cash equivalents mitigated by higher inventory, as the Company is protecting specific commercial positions.

Net Debt

	As at December 31, 2018	As at December 31, 2017
	$	$
Bank indebtedness	**-**	-
Long-term debt including current portion	**30,175**	271
Convertible debentures	**18,571**	48,768
Cross-currency swap	**197**	(3,602)
Total Debt	**48,943**	45,437
Cash and cash equivalents	**(26,724)**	(34,024)
Net Debt[1]	**22,219**	11,413

Total debt, including the cross-currency swap, increased by $3.5 million to $48.9 million as at December 31, 2018, compared to $45.4 million as at December 31, 2017.

Net debt[1], after considering cash and cash equivalents, increased by $10.8 million, from $11.4 million as at December 31, 2017 to $22.2 million as at December 31, 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 December 31, 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.

Available Short-Term Capital Resources

	As at December 31, 2018	As at December 31, 2017
	$	$
Cash and cash equivalents	**26,724**	34,024
Available bank indebtedness	**1,454**	1,530
Available revolving credit facility	**49,000**	52,998
Available short-term capital resources	**77,178**	88,552

[1] See Non-IFRS Measures

In April 2018, the Company signed a senior secured multi-currency revolving credit facility of $79.0 million maturing in April 2022 to replace its existing $50.0 million senior secured revolving facility maturing in August 2018. At any time, the Company has the option to request that the credit facility be expanded through the exercise of an additional $30.0 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 (up to $4.0 million). 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 net debt to consolidated EBITDA ratio. Under the terms of its credit facility, the Company is required to satisfy certain restrictive covenants as to financial ratios. As at December 31, 2018, the Company has met all covenants.

On February 6, 2019, 5N Plus announced the closing of a $25.0 million unsecured subordinated term loan with Investissement Québec. As 5N Plus nears the halfway point of its strategic plan, more emphasis will be placed on the development of its growth initiatives along with further investment in efficiency gains from its core businesses. To that end, it is expected that the proceeds from the unsecured term loan will be utilized to support these programs along with the repayment of the balance of the unsecured convertible debentures issued by the Company in 2014; which will mature on June 30, 2019. The new loan has a five-year term and will be disbursed in two tranches: the first tranche of $5.0 million was disbursed on February 6, 2019 and the second tranche of $20.0 million will be disbursed by no later than March 29, 2019. The new term loan will bear an interest equivalent to the 5-year US dollar swap rate plus a margin of 4.19%.

Share Information

	As at February 26, 2019	As at December 31, 2018
Issued and outstanding shares	**84,622,291**	84,609,791
Stock options potentially issuable	**1,478,041**	1,490,541
Convertible debentures potentially issuable	**3,851,851**	3,851,851

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.

In FY 2018, the Company granted 393,897 New RSUs, 28,361 New RSUs were paid and 67,370 New RSUs were forfeited. In FY 2017, the Company granted 368,360 New RSUs, none were paid and 37,500 were forfeited. As at December 31, 2018, 1,854,026 New RSUs were outstanding compared to 1,555,860 as at December 31, 2017.

No PSUs were granted in FY 2018 and FY 2017 and 500,000 PSUs were outstanding as at December 31, 2018 and 2017.

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, 2018 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.

The following table presents information concerning all outstanding stock options:

	2018		2017	
	Number of options	**Weighted average exercise price**	Number of options	Weighted average exercise price
		CA$		CA$
Outstanding, beginning of year	**2,224,747**	**2.20**	2,860,648	2.63
Granted	**143,335**	**2.71**	288,000	1.75
Exercised	**(708,750)**	**1.92**	(597,500)	1.75
Forfeited	**(137,704)**	**2.54**	(116,476)	2.50
Expired	**(31,087)**	**3.61**	(209,925)	8.59
Outstanding, end of year	**1,490,541**	**2.32**	2,224,747	2.20
Exercisable, end of year	**726,750**	**2.75**	1,001,497	2.59

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, 2018.

The following table reflects the contractual maturity of the Company's financial liabilities as at December 31, 2018:

	Carrying amount	1 year	2 years	3 years	4 years	Total
	$	$	$	$	$	$
Trade and accrued liabilities	39,249	39,249	-	-	-	39,249
Long-term debt	30,175	1,394	1,219	1,219	31,219	35,051
Convertible debentures	18,571	19,884	-	-	-	19,884
Total	87,995	60,527	1,219	1,219	31,219	94,184

Commitments

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

	2018
	$
No later than 1 year	1,598
Later than 1 year but no later than 5 years	2,635
Later than 5 years	61
Total	4,294

As at December 31, 2018, in the normal course of business, the Company contracted letters of credit for an amount of $0.4 million and $0.4 million as at December 31, 2017.

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.

Subsequent events

On February 6, 2019, the Company announced the closing of a $25.0 million unsecured subordinated term loan with Investissement Québec. The new loan has a five-year term and will be disbursed in two tranches: the first tranche of $5.0 million was disbursed on February 6, 2019 and the second tranche of $20.0 million will be disbursed by no later than March 29, 2019. The new term loan will bear an interest equivalent to the 5-year US dollar swap rate plus a margin of 4.19%.

On February 11, 2019, the Company' shareholders voted to approve a special resolution by which the stated capital of the common shares of the Company be reduced to $5.0 million and the amount of the reduction be added to the contributed surplus of the Company pursuant to Section 38(1) of the *Canada Business Corporation Act*. The reduction of stated capital will not result in any change to shareholders' equity.

On February 25, 2019, 5N Plus announced that it has exercised its right to redeem all of its 5.75% convertible unsecured subordinated debentures maturing on June 30, 2019. On March 28, 2019 the Company will redeem its convertible debentures in an aggregate principal amount of CA$26 million. Following the redemption, no outstanding convertible debentures will remain.

Governance

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

Disclosure Controls and Procedures

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

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

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

Internal Control over Financial Reporting

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

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

Changes in Internal Control over Financial Reporting

No changes were made to our ICFR during the fiscal year ended December 31, 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 2018 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, 2018.

Changes in accounting policies

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 IFRS 15 did not result in significant changes in the accounting for revenue from contracts with customers and the Company has concluded that there was no significant impact on its consolidated financial statements nor would there have been any significant effect on the 2018 consolidated statement of earnings had the prior accounting policies continued to be applied.

IFRS 9 – Financial Instruments

On January 1, 2018, the Company has also adopted the new accounting standard IFRS 9 and elected to apply prospectively. The adoption of the new classification requirements under IFRS 9 did not result in a change in the carrying value of any of Company's financial instruments on the transition date.

Future changes in accounting policies

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

IFRS 16 – Leases

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

Effective January 1, 2019, the Company will adopt IFRS 16 using the modified retrospective approach and will chose the option under which the amount of the right-of-use assets will be equal to the amount of the lease liabilities. The expected impact in the consolidated statement of financial position of this new standard is noted below.

For contracts entered into before January 1, 2019, the Company determined whether the arrangement contained a lease under IAS 17 and IFRIC 4. Prior to the adoption of IFRS 16, these leases were classified as operating or finance leases based on an assessment of whether the lease transferred significantly all the risks and rewards of ownership of the underlying asset. The Company leases production and warehouse locations, production equipment and furniture, office equipment and rolling stock.

On transition, the Company will elect to apply the practical expedient to grandfather the determination of which contract is or contains a lease and will apply IFRS 16 to those contracts that were previously identified as leases. Upon transition to the new standard, right-of-use assets and lease liabilities will be measured at the present value of the remaining lease payments discounted by the Company's incremental borrowing rate as at January 1, 2019.

At transition, right-of-use assets and lease liabilities of approximately $7.0 million will be recognized in the consolidated statement of financial position.

The Company will elect not to recognize right-of-use assets and lease liabilities for leases with a lease term of less than 12 months and low value assets and will continue to recognize the lease payments associated with these leases as an expense on a straight-line basis over the lease term, as permitted by IFRS 16.

IFRIC 23 – Uncertainty over Income Tax Treatments

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.

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 publicly available metals information as at December 31, 2018. 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.

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. 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 are provided in note 12 of the 2018 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 2018 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 2018 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 2018 consolidated financial statements of the Company.

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

	2018	2017
	$	$
Debenture conversion option	**-**	-
Cross-currency swap	**(197)**	3,602
Equity swap agreement	**5,835**	6,141

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 2018 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, made of subordinated debts, currently as 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 have an impact of approximately $0.2 million on the Company's net earnings on a twelve-month horizon based on the balance outstanding on December 31, 2018.

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, 2018, 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, 2018:

	CA$	EUR	GBP	RMB	MYR	Other
	$	$	$	$	$	$
Cash and cash equivalents	3,462	3,555	1,126	652	582	433
Accounts receivable	196	6,197	170	1,169	-	754
Other current assets	5,835	-	-	-	-	-
Trade and accrued liabilities	(11,703)	(8,726)	-	(659)	(407)	(566)
Long-term debt	(175)	-	-	-	-	-
Net financial assets (liabilities)	(2,385)	1,026	1,296	1,162	175	621

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, 2018 for the Company's financial instruments denominated in non-functional currencies:

	CA$	EUR	GBP	RMB	MRY	Other
	$	$	$	$	$	$
5% Strengthening	(119)	51	65	58	9	31
5% Weakening	119	(51)	(65)	(58)	(9)	(31)

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.

The Company applies the IFRS 9 simplified approach to measuring expected credit losses using a lifetime expected credit loss allowance for trade receivables. The expected loss rates are based on the Company's historical credit losses experienced over the three-year period prior to the period end. The historical loss rates are then adjusted for current and forward-looking information on macroeconomic factors affecting the Company's customers.

As at December 31, 2018 and 2017, the Company had a loss allowance of $0.1 million. The loss allowance is included in selling, general and administrative expenses in the consolidated statement of earnings 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, Laos and Malaysia, 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.

The following conditions or events could disrupt our supply chain, interrupt production at our facilities or those of our suppliers or customers, increase our cost of sales and other operating expenses, result in material asset losses, or require additional capital expenditures to be incurred:

- fires, pandemics, extraordinary weather conditions, or natural disasters, such as hurricanes, tornadoes, floods, tsunamis, typhoons, and earthquakes;
- political instability, social and labour unrest, war, or terrorism;
- disruptions in port activities, shipping and freight forwarding services; and
- interruptions in the availability of basic services and infrastructure, including power and water shortages.

Our insurance programs do not cover every potential loss associated with our operations, including potential damage to assets, lost profits, and liability that could result from the aforementioned conditions or events. In addition, our insurance may not fully cover the consequences resulting from a loss event, due to insurance limits, sub-limits, or policy exclusions. Any occurrence not fully covered by insurance could have a negative effect on our business.

Risks Related to China

The legal system in mainland China is a civil law system based on written statutes. Unlike common law systems, it is a system in which decided legal cases have little precedential value. The legal system in mainland China evolves rapidly, and the interpretations of many laws, regulations and rules may contain inconsistencies and their interpretation and enforcement involve uncertainties. These uncertainties could limit the legal protections available to us. In addition, the company cannot predict the effect of future developments in the mainland Chinese legal system, including the promulgation of new laws, changes to existing laws or the interpretation or enforcement thereof, or the pre-emption of local regulations by national laws. Such unpredictability towards the company's contractual, property (including intellectual property) and procedural rights could adversely affect the company's business and impede its ability to continue operations. Furthermore, any litigation in mainland China may be protracted and result in substantial costs and diversion of resources and management attention.

The mainland Chinese government exercises significant control over mainland China's economic growth through strategically allocating resources, controlling the payment of foreign currency-denominated obligations, setting monetary policy and providing preferential treatment to particular industries or companies. Any growth in the Chinese economy may not continue and any slowdown may have a negative effect on our business. Any adverse changes in economic conditions in mainland China, in the policies of the mainland Chinese government, or in the laws and regulations in mainland China, could have a material adverse effect on the overall economic growth of mainland China. Such developments could adversely affect the company's businesses, lead to reduction in demand for its products and adversely affect the company's competitive position.

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 include, but are not limited to, barriers to or restrictions on free trade, changes in taxes, tariffs and other regulatory costs. The current global political environment, including the stated positions of the U.S. administration (expressed through its withdrawal from the Trans-Pacific Partnership Agreement and the renegotiation of the North American Free Trade Agreement) and the 2016 vote in favour of the exit of the United Kingdom from the European Union, appear to favour increasing restrictions on trade. Such restrictions could have a negative effect on our business if they were to limit our ability to export our products to markets in which we currently do business or to import raw materials from our current suppliers. Conversely, it is possible that they could have a favourable effect on our business if they were to inhibit competition in markets in which we do business without having an adverse effect on our operations.

Although we operate primarily in countries with proximity to our customers 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. Failure to comply with such laws, regulations and permits can have serious consequences, including damage to our reputation; stopping us from pursuing operations at one of our facilities; being subject to substantial fines, penalties, criminal proceedings, third party property damage or personal injury claims, clean-up costs or other costs; increasing the costs of development or production and litigation or regulatory action against us, and materially adversely affecting our business, results of operations or financial condition. Future changes in applicable environmental and health and safety laws and regulations could substantially increase costs and burdens to achieve compliance or otherwise have an adverse impact on our business, results of operations or financial condition.

We have incurred and will continue to incur capital expenditures in order to comply with environmental laws and regulations. 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. These fluctuations can be unpredictable and can occur over short periods of time. 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. There can be no assurance that our confidentiality agreements will provide meaningful protection for our intellectual property rights or other proprietary information in the event of any unauthorized use or disclosure or that we will be able to meaningfully protect our trade secrets.

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.

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.

Litigation Risks

We may be subject to a variety of civil or other legal proceedings, with or without merit.

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

Adjusted net earnings 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.

Selected Quarterly Financial Information

(in thousands of United States dollars except per share amounts)	**Dec. 31, 2018**	Sept. 30, 2018	June 30, 2018	March 31, 2018	Dec. 31, 2017	Sept. 30, 2017	June 30, 2017	March 31, 2017
	$	$	$	$	$	$	$	$
Revenue	**47,710**	53,379	58,359	58,547	52,492	50,325	56,229	60,870
EBITDA[1]	**5,589**	7,772	7,860	7,800	4,420	6,427	6,341	9,675
Adjusted EBITDA[1]	**6,912**	8,581	8,972	7,885	6,763	6,942	9,236	6,646
Net earnings attributable to equity holders of 5N Plus	**4,046**	3,457	3,417	3,051	2,229	2,224	3,416	4,154
Basic earnings per share attributable to equity holders of 5N Plus	**$0.05**	$0.04	$0.04	$0.04	$0.03	$0.03	$0.04	$0.05
Net earnings	**4,046**	3,458	3,420	3,048	2,222	2,223	3,415	4,153
Basic earnings per share	**$0.05**	$0.04	$0.04	$0.04	$0.03	$0.03	$0.04	$0.05
Diluted earnings per share	**$0.05**	$0.04	$0.04	$0.04	$0.03	$0.03	$0.04	$0.05
Adjusted net earnings[1]	**5,407**	3,919	5,344	2,814	3,884	2,572	5,409	2,024
Basic adjusted net earnings per share[1]	**$0.06**	$0.05	$0.06	$0.03	$0.05	$0.03	$0.06	$0.02
Funds from operations[1]	**8,641**	6,582	7,194	6,226	5,398	4,263	7,945	8,730
Backlog[1]	**217 days**	181 days	170 days	172 days	187 days	178 days	135 days	128 days

Selected Yearly Financial Information

As at and for the years ended December 31 (in thousands of United States dollars except per share amounts)	**2018**	2017	2016
	$	$	$
Revenue	**217,995**	219,916	231,498
EBITDA	**29,021**	26,863	15,111
Adjusted EBITDA	**32,350**	29,587	22,323
Net earnings (loss) attributable to equity holders of 5N Plus	**13,972**	12,023	(5,895)
Basic earnings(loss) per share attributable to equity holders of 5N Plus	**$0.17**	$0.14	($0.07)
Net earnings (loss)	**13,972**	12,013	(5,896)
Basic earnings (loss) per share	**$0.17**	$0.14	($0.07)
Diluted earnings (loss) per share	**$0.17**	$0.14	($0.07)
Adjusted net earnings	**17,484**	13,889	3,454
Basic adjusted net earnings per share	**$0.21**	$0.17	$0.04
Funds from operations	**28,643**	26,336	12,486
Backlog	**217 days**	187 days	136 days
Balance Sheet			
Total assets	**237,057**	244,932	219,057
Total non-current liabilities	**51,430**	70,851	64,415
Net debt[1]	**22,219**	11,413	18,992
Shareholders' equity	**119,703**	105,446	88,522

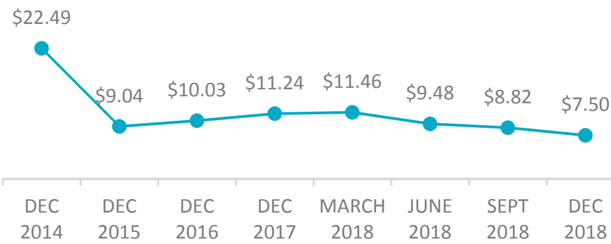
(in thousands of United States dollars)	2017	Dec. 31, 2017	Sept. 30, 2017	June 30, 2017	March 31, 2017	2016
	$	$	$	$	$	$
Adjusted operating expenses – previous definition	194,799	46,441	44,170	49,390	54,798	211,387
Share-based compensation expense	(4,470)	(712)	(787)	(2,397)	(574)	(2,212)
Adjusted operating expenses[1] – current definition	190,329	45,729	43,383	46,993	545,224	209,175

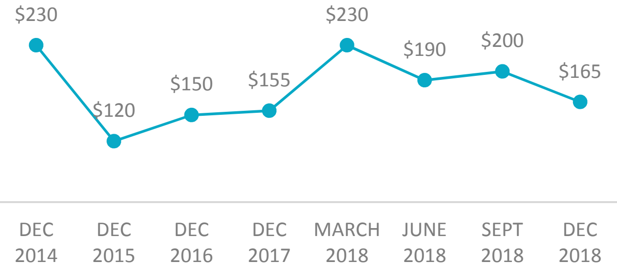
(in thousands of United States dollars)	2017	Dec. 31, 2017	Sept. 30, 2017	June 30, 2017	March 31, 2017	2016
	$	$	$	$	$	$
Adjusted EBITDA – previous definition	25,117	6,051	6,155	6,839	6,072	20,111
Share-based compensation expense	4,470	712	787	2,397	574	2,212
Adjusted EBITDA[1] – current definition	29,587	6,763	6,942	9,236	6,646	22,323

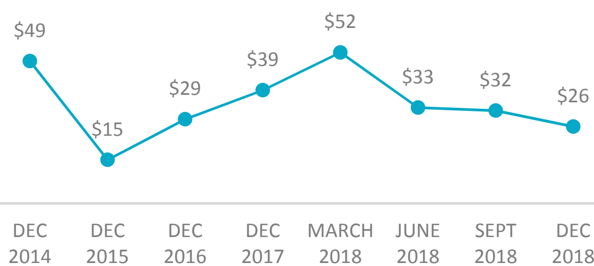
(in thousands of United States dollars, except per share amounts)	2017	Dec. 31, 2017	Sept. 30, 2017	June 30, 2017	March 31, 2017	2016
	$	$	$	$	$	$
Adjusted net earnings – previous definition	10,604	3,361	1,994	3,647	1,602	1,838
Basic adjusted net earnings per share –previous definition	$0.13	$0.04	$0.02	$0.04	$0.02	$0.02
Share-based compensation expense	4,470	712	787	2,397	574	2,212
Income tax expense on taxable items above	(1,185)	(189)	(209)	(635)	(152)	(596)
Adjusted net earnings[1] – current definition	13,889	3,884	2,572	5,409	2,024	3,454
Basic adjusted net earnings per share[1] – current definition	$0.17	$0.05	$0.03	$0.06	$0.02	$0.04

[1] See Non-IFRS Measures

Metal Prices
(in U.S. dollars per kilo)







Source : Low Metal Bulletin