5N+
Enabling
Performance

4 Management Report

Quarter Ended
December 31, 2023

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+"), 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, 2023, based on International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS Accounting Standards" or "IFRS"), unless otherwise stated. This MD&A has been prepared in accordance with the requirements of the Canadian Securities Administrators.

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.

Information contained herein includes any significant developments until February 27, 2024, 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 2023" and "Q4 2022" refer to the three-month periods ended December 31, 2023 and December 31, 2022, respectively; "FY 2023" and "FY 2022" refer to the years ended December 31, 2023, and December 31, 2022, respectively.

Non-IFRS Measures

This MD&A contains certain non-IFRS financial measures and ratios, which do not have a standard meaning under IFRS Accounting Standards and, therefore, may not be comparable to similar measures presented by other issuers. Such non-IFRS measures and ratios include backlog, bookings, EBITDA, EBITDA margin percentage, Adjusted EBITDA, Adjusted EBITDA margin, Adjusted operating expenses, Adjusted net earnings (loss), Basic adjusted earnings (loss) per share, Adjusted gross margin, Adjusted gross margin percentage, Total debt, Net debt, Net debt to EBITDA ratio, Working capital and Working capital ratio.

For definitions, further information and reconciliation of these measures to the most directly comparable measures under IFRS Accounting Standards, see the "Non-IFRS Measures" section.

Notice Regarding Forward-Looking Statements

Certain statements in this MD&A may be forward-looking within the meaning of applicable securities laws. Such forward-looking statements are based on a number of estimates and assumptions that the Company believes are reasonable when made, including that 5N+ will be able to retain and hire key personnel and maintain relationships with customers, suppliers and other business partners, that 5N+ will continue to operate its business in the normal course, that 5N+ will be able to implement its growth strategy, that 5N+ will be able to successfully and timely complete the realization of its backlog, that 5N+ will not suffer any supply chain challenges or any material disruption in the supply of raw materials on competitive terms, that 5N+ will be able to generate new sales, produce, deliver, and sell its expected product volumes at the expected prices and control its costs, as well as other factors believed to be appropriate and reasonable in the circumstances. However, there can be no assurance that such estimates and assumptions will prove to be correct. These statements are not guarantees of future performance and involve assumptions, risks and uncertainties that are difficult to predict and 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 interest rate, foreign currency, credit, liquidity, global economic conditions, international operations including China, environmental regulations, crisis and climate change management, environmental social and governance (ESG) considerations, safety and hazards, prolonged armed conflict in Ukraine, disease outbreaks, availability and retention of qualified professional employees, collective agreements, litigation, our growth strategy, competition, commodity price, sources of supply, protection of intellectual property, inventory price, business interruptions, loss of an important customer, changes to backlog, acquisitions, systems, network infrastructure and data failure, privacy, market price of the common shares, as well as grants and other incentive programs. 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 27, 2024.

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 statements in this MD&A will transpire or occur, or if any of them do so, what benefits that 5N+ will derive therefrom. In particular, no assurance can be given as to the future financial performance of 5N+. The forward-looking statements 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.

Overview

5N+ is a leading global producer of specialty semiconductors and performance materials. The Company's ultra-pure materials often form the core element of its customers' products. These customers rely on 5N+'s products to enable performance and sustainability in their own products. 5N+ deploys a range of proprietary and proven technologies to develop and manufacture its products. The Company's products enable various applications in several key industries, including renewable energy, security, space, pharmaceutical, medical imaging and industrial. Headquartered in Montréal, Québec, 5N+ operates R&D, manufacturing and commercial centers in strategically-located facilities around the world including Europe, North America and Asia.

Vision, Mission and Values

The Company's vision is to enable critical industries through essential products based on advanced material technology and 5N+'s aim is to propel the growth of these markets by developing and manufacturing advanced materials to enable product performance.

The Company's mission is to be critical to its customers, valued by its employees and trusted by its shareholders. The Company's core values are integrity, commitment and customer development, with an emphasis on sustainable development, continuous improvement, and health and safety.

Reporting Segments

The Company has the following two reportable segments: Specialty Semiconductors and Performance Materials. Corresponding operations and activities are managed accordingly by the Company's key decision makers. Segmented operating and 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 are reconciled to consolidated numbers considering corporate income and expenses.

Operating in North America and Europe, the Specialty Semiconductors segment manufactures and sells products used in several applications, such as renewable energy, space satellites and imaging. Typical end markets include photovoltaics (terrestrial and spatial solar energy), medical imaging, infrared imaging, optoelectronics and advanced electronics. These products are sold either as semiconductor compounds, semiconductor wafers, ultra high purity metals, epitaxial semiconductor substrates and solar cells. Revenues and earnings associated with recycling services and activities provided to Specialty Semiconductors customers are captured in this segment.

The Performance Materials segment operates in North America, Europe and Asia and manufactures and sells products that are used in several applications in pharmaceutical and healthcare and industrial. Main products are sold as active pharmaceutical ingredients, animal feed additives, specialized chemicals, commercial grade metals, alloys and engineered powders. All commercial grade metal and engineered powder sales have been regrouped under Performance Materials. Revenues and earnings associated with recycling services and activities provided to Performance Materials customers are captured in this segment.

Corporate expenses associated with the head office and unallocated selling, general and administrative expenses (SG&A), together with financial expenses (income), are grouped under "Corporate".

[1] These measures are not recognized measures under IFRS and do not have standardized meanings prescribed by IFRS and therefore may not be comparable to similar measures presented by other companies. See Non-IFRS Measures for more information.

Q4 & FY 2023 Highlights – A Year Poised for Continued Strong Growth

Throughout FY 2023, 5N+ has successfully executed on its growth strategy to provide higher margin, value-added products under both its Specialty Semiconductor and Performance Materials segments. Its record reported Adjusted EBITDA and strong Gross Margin results for FY 2023 are proof that the Company is effectively leveraging its industry position as a supplier outside China in space solar power and terrestrial renewable energy technology. As management continues with its commercial excellence program, which has led to strong customer relationships and a sustained backlog[1], the investments made in production capacity will support the strong demand contracted through 2024 and 2025.

All amounts are expressed in U.S. dollars.

The Company met its expectations of delivering excellent performance in FY 2023 with Adjusted EBITDA results for FY 2023 reaching the highest level reported since the Company's creation. The Company achieved Adjusted EBITDA growth of 35% in Q4 2023 and 28% in FY 2023, compared to the same periods in 2022. Adjusted gross margin[1] came in at 29.0% in FY 2023, compared to 23.7% in FY 2022, as a result of its commercial excellence program, which focuses on improved margins, value-added product development and a customer-first approach. 5N+ also ended the year with a particularly strong backlog[1] under Specialty Semiconductors.

In Specialty Semiconductors, revenue was up $13.7 million in Q4 2023 and up $34.6 million for FY 2023, compared to the corresponding periods last year. Adjusted EBITDA was 31% higher in Q4 2023 compared to Q4 2022 and 13% higher on a full-year basis.

Under Performance Materials, the exit from the low-margin extractive and catalytic products in the second half of 2022 continued to impact results. As such, revenue for the quarter and FY 2023 was lower compared to the same periods in 2022. However, because of the improved product mix, the segment generated a 15% increase in Adjusted EBITDA in Q4 2023 and a 27% increase for FY 2023, compared to the corresponding periods last year.

While the Company continued to invest in building capacity and inventory to meet increasing demand in its Specialty Semiconductor segment, it was able to lower net debt[1] by $4.5 million in 2023.

In 2023, 5N+ invested to increase capacity by 40% over 2022 to serve the renewable energy sector, with a further 60% expansion to be completed in 2024. Once completed, the Company will have doubled its output capacity to serve this critical sector. Other capacity expansion plans for 2024 remain on track, with the Company committed to increasing its production capability for AZUR SOLAR Space GmbH ("AZUR") by 30% to support space solar sector important demand. In addition, 5N+ has been actively working to secure additional complex feeds and secondary market streams for the recovery of critical minerals and management expects operations in recycling and refining to be at capacity in 2024.

Financial Highlights

- Revenue in Q4 2023 reached $65.1 million, compared to $61.0 million for the same period last year. The 7% increase is primarily attributable to higher demand in the Specialty Semiconductors segment, offset by lower revenue in the Performance Materials segment following the strategic exit from the manufacturing of low-margin extractive and catalytic products in 2022.

- Net earnings in Q4 2023 were $2.3 million compared to a net loss of $8.1 million in Q4 2022. Net earnings in FY 2023 were $15.4 million compared to a net loss of $23.0 million in FY 2022.

- Adjusted EBITDA in Q4 2023 was $9.0 million, a 35% increase over the $6.7 million for the same period last year. Adjusted EBITDA was $38.3 million in FY 2023, a 28% increase compared to $30.0 million in FY 2022.

- Adjusted gross margin in FY 2023 was 29.0%, compared to 23.7% in FY 2022.

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- On December 31, 2023, the backlog represented 292 days of annualized revenue, 8 days higher than the previous quarter and 39 days higher than the same period last year, primarily due to increasing demand in both terrestrial renewable energy and space solar power.

- Net debt was $73.8 million as at December 31, 2023, compared to $78.3 million as at December 31, 2022. Net debt to EBITDA ratio[1] of 1.69x as at December 31, 2023.

Outlook

In Specialty Semiconductors, 5N+ continues to benefit from its unique position as the leading global supplier of ultra-high purity semiconductor compounds outside China, with extensive expertise and a favourable global footprint resulting in a reliable supply chain. The Company's products can be found in a wide range of technologies used in critical applications and everyday products.

Growing demand remains the rule in Specialty Semiconductors end markets, particularly in terrestrial renewable energy and space solar power. This positions 5N+ well to capitalize on future opportunities in these high-growth sectors, as well as other markets, including defense, security and medical imaging, and through its long-term partnerships with key customers.

Management expects growth in the Performance Materials segment to be primarily derived from health and pharmaceutical products, which provide high profitability and predictable cashflows. Additional long-term opportunities are expected to stem from product expansion and development initiatives, including through partnerships.

Furthermore, management continues to seek opportunities to increase operational efficiency, while exploring potential acquisitions and partnerships to enhance its own organic growth and leadership market position.

With the visibility afforded to management as a result of the solid execution of its business strategy over the last few years, its improved product mix and strong backlog, management is committed to sustaining its trajectory with respect to Adjusted EBITDA growth and margin improvements.

To meet these objectives, 5N+ will continue to execute on its value-added focused strategy and commercial excellence program, leveraging its competitive advantages stemming from its unique positioning both from a geographic and expertise standpoint. As a trusted partner in the development and manufacturing of critical specialty semiconductors and performance materials with a customer-centric mentality, the Company will also continue methodically investing in its production capacity to serve high-growth markets and strategic global customers.

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Summary of Results

(in thousands of U.S. dollars, except per share amounts)	Q4 2023	Q4 2022	FY 2023	FY 2022
	$	$	$	$
Revenue	**65,063**	61,042	**242,371**	264,223
Adjusted operating expenses[1]	**(56,030)**	(54,337)	**(204,048)**	(234,195)
Adjusted EBITDA	**9,033**	6,705	**38,323**	30,028
Share-based compensation (expense) recovery	**(414)**	171	**(1,432)**	(999)
Litigation and restructuring (costs) income	**(458)**	(3,210)	**8,314**	(3,823)
Impairment of non-current assets	**(64)**	-	**(672)**	(12,478)
Loss on disposal of property, plant and equipment	**-**	-	**(1,051)**	-
Loss on divestiture of subsidiary	**-**	(7,834)	**-**	(7,834)
Loss on disposal of assets held for sale	**-**	-	**-**	(216)
Foreign exchange and derivative (loss) gain	**(361)**	497	**136**	(42)
EBITDA[1]	**7,736**	(3,671)	**43,618**	4,636
Interest on long-term debt, imputed interest and other interest expense	**2,129**	716	**8,834**	5,192
Depreciation and amortization	**4,057**	4,051	**16,110**	17,732
Earnings (loss) before income taxes	**1,550**	(8,438)	**18,674**	(18,288)
Income tax expense (recovery)				
Current	**612**	43	**6,674**	6,865
Deferred	**(1,346)**	(335)	**(3,399)**	(2,154)
	(734)	(292)	**3,275**	4,711
Net earnings (loss)	**2,284**	(8,146)	**15,399**	(22,999)
Basic earnings (loss) per share	**$0.03**	($0.09)	**$0.17**	($0.26)
Diluted earnings (loss) per share	**$0.03**	($0.09)	**$0.17**	($0.26)

Revenue by Segment and Adjusted Gross Margin

(in thousands of U.S. dollars)	Q4 2023	Q4 2022	Change	FY 2023	FY 2022	Change
	$	$		$	$	
Specialty Semiconductors	**45,661**	31,951	43%	**156,479**	121,918	28%
Performance Materials	**19,402**	29,091	(33%)	**85,892**	142,305	(40%)
Total revenue	**65,063**	61,042	7%	**242,371**	264,223	(8%)
Cost of sales	**(49,677)**	(47,909)	4%	**(184,833)**	(215,715)	(14%)
Depreciation included in cost of sales	**3,189**	3,155	1%	**12,656**	14,208	(11%)
Adjusted gross margin	**18,575**	16,288	14%	**70,194**	62,716	12%
Adjusted gross margin percentage[1]	**28.5%**	26.7%		**29.0%**	23.7%	

Revenue in Q4 2023 increased by 7%, reaching $65.1 million, compared to $61.0 million for the same period last year. The increase is primarily attributable to the growth experienced under Specialty Semiconductors from the renewable energy and space power sectors, exceeding the lower revenue under Performance Materials following the Company's strategic exit from the manufacturing of low-margin extractive and catalytic products in the second half of 2022 and the related divestiture of its Tilly, Belgium operations in Q4 2022.

Adjusted gross margin in FY 2023 was favourably impacted by the consolidated product mix, supported by the implementation of the Company's commercial excellence program last year, and the Company's exit from the manufacturing of low-margin extractive and catalytic products. Adjusted gross margin reached $18.6 million, or 28.5%, compared to $16.3 million, or 26.7%, in Q4 2022, and $70.2 million, or 29.0%, in FY 2023, compared to $62.7 million, or 23.7%, in FY 2022.

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Specialty Semiconductors Segment
Revenue in Q4 2023 reached $45.7 million, compared to $32.0 million in Q4 2022. In FY 2023, revenue reached $156.5 million, compared to $121.9 million in FY 2022, supported by higher demand in specific sectors. Adjusted gross margin in Q4 2023 was 26.7% compared to 31.0% in Q4 2022 impacted by a less favourable revenue mix. In FY 2023, Adjusted gross margin was 26.3%, compared to 28.1% in FY 2022.

Performance Materials Segment
Revenue in Q4 2023 reached $19.4 million, compared to $29.1 million in Q4 2022. In FY 2023, revenue reached $85.9 million, compared to $142.3 million in FY 2022. The decrease is primarily attributable to the Company's strategic exit from the manufacturing of low-margin extractive and catalytic products in the second half of 2022 and the related divestiture of its Tilly, Belgium operations in Q4 2022. In FY 2023, Adjusted gross margin was 34.6%, compared to 20.4% in FY 2022.

Operating Earnings (Loss), EBITDA and Adjusted EBITDA

(in thousands of U.S. dollars)	**Q4 2023**	Q4 2022	Change	**FY 2023**	FY 2022	Change
	$	$		**$**	$	
Specialty Semiconductors	**7,480**	5,690	31%	**27,544**	24,318	13%
Performance Materials	**4,615**	3,997	15%	**21,948**	17,277	27%
Corporate	**(3,062)**	(2,982)	3%	**(11,169)**	(11,567)	(3%)
Adjusted EBITDA	**9,033**	6,705	35%	**38,323**	30,028	28%
EBITDA	**7,736**	(3,671)		**43,618**	4,636	
Operating earnings (loss)	**4,040**	(8,219)		**27,372**	(13,054)	

Adjusted EBITDA in Q4 2023 reached $9.0 million, an increase of $2.3 million or 35%, compared to $6.7 million in Q4 2022. Adjusted EBITDA was $38.3 million in FY 2023, a 28% increase compared to $30.0 million in FY 2022.

In Q4 2023, EBITDA reached $7.7 million, compared to negative $3.7 million in Q4 2022. The increase of $11.4 million is mainly explained by a loss of divestiture of the Tilly, Belgium operations, as well as higher costs for litigation and restructuring recorded by the Company in Q4 2022. For more information, see the "Expenses" section.

In Q4 2023, operating earnings amounted to $4.0 million, compared to an operating loss of $8.2 million in Q4 2022. In FY 2023, operating earnings amounted to $27.4 million, compared to an operating loss of $13.1 million in FY 2022.

Specialty Semiconductors Segment
Adjusted EBITDA in Q4 2023 increased by $1.8 million, or 31%, under Specialty Semiconductors to reach $7.5 million. Adjusted EBITDA in FY 2023 increased by $3.2 million to $27.5 million, representing an Adjusted EBITDA margin[1] of 18%, compared to 20% for the same period in FY 2022.

Performance Materials Segment
Adjusted EBITDA in Q4 2023 increased by $0.6 million, or 15%, to $4.6 million, representing an Adjusted EBITDA margin of 24%, compared to 14% in Q4 2022. Adjusted EBITDA in FY 2023 increased by $4.7 million to $21.9 million, representing an Adjusted EBITDA margin of 26%, compared to 12% in the same period in 2022. The increase is primarily attributable to the Company's strategic exit from the manufacturing of low margin extractive and catalytic products in the second half of FY 2022 and the related divestiture of its Tilly, Belgium operations in Q4 2022.

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

(in thousands of U.S. dollars, except per share amounts)	**Q4 2023**	Q4 2022	**FY 2023**	FY 2022
	$	$	**$**	$
Net earnings (loss)	**2,284**	(8,146)	**15,399**	(22,999)
Basic earnings (loss) per share	**$0.03**	($0.09)	**$0.17**	($0.26)
Reconciling items:				
Share-based compensation expense (recovery)	**414**	(171)	**1,432**	999
Litigation and restructuring costs (income)	**458**	3,210	**(8,314)**	3,823
Impairment of non-current assets	**64**	-	**672**	12,478
Loss on disposal of property, plant and equipment	**-**	-	**1,051**	-
Loss on divestiture of subsidiary	**-**	7,834	**-**	7,834
Loss on disposal of assets held for sale	**-**	-	**-**	216
Income tax recovery on taxable items above	**(226)**	(595)	**(854)**	(2,618)
Adjusted net earnings (loss)[1]	**2,994**	2,132	**9,386**	(267)
Basic adjusted earnings (loss) per share[1]	**$0.03**	$0.02	**$0.11**	$-

In Q4 2023, net earnings were $2.3 million or $0.03 per share, compared to a net loss of $8.1 million or $0.09 per share in Q4 2022. Adjusted net earnings were $3.0 million or $0.03 per share in Q4 2023, compared to $2.1 million or $0.02 per share in Q4 2022.

In FY 2023, net earnings were $15.4 million or $0.17 per share, compared to a net loss of $23.0 million or $0.26 per share in FY 2022. Adjusted net earnings were $9.4 million or $0.11 per share in FY 2023, compared to an Adjusted net loss of $0.3 million or $nil per share in FY 2022.

Excluding income tax recovery, the items reconciling Adjusted net earnings in Q4 2023 are share-based compensation expense and litigation and restructuring costs. For FY 2023, the items are share-based compensation expense, litigation and restructuring income of $8.3 million, an impairment charge on non-current assets of $0.7 million and a loss on disposal of PPE of $1.1 million. For more information, see the "Expenses" section.

Backlog and Bookings

	BACKLOG			BOOKINGS[1]		
(in thousands of U.S. dollars)	**Q4 2023**	Q3 2023	Q4 2022	**Q4 2023**	Q3 2023	Q4 2022
	$	$	$	**$**	$	$
Specialty Semiconductors	**174,957**	167,709	129,710	**52,909**	50,710	57,325
Performance Materials	**33,346**	28,205	39,611	**24,543**	21,239	33,648
Total	**208,303**	195,914	169,321	**77,452**	71,949	90,973

	BACKLOG			BOOKINGS		
(number of days based on annualized revenues)*	**Q4 2023**	Q3 2023	Q4 2022	**Q4 2023**	Q3 2023	Q4 2022
Specialty Semiconductors	**350**	365	365	**106**	111	164
Performance Materials	**157**	122	124	**115**	92	106
Weighted average	**292**	284	253	**109**	104	136

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

Q4 2023 vs. Q3 2023

Backlog on December 31, 2023, represented 292 days of annualized revenue, 8 days higher than the backlog on September 30, 2023.

The backlog for Specialty Semiconductors represented 350 days of annualized revenue, a decrease of 15 days or 4%, over the backlog on September 30, 2023, due to the timing of signing and/or renewal of contracts.

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The backlog for Performance Materials represented 157 days of annualized revenue, an increase of 35 days, or 29%, compared to the backlog on September 30, 2023, mainly due to the signing and/or renewal of contracts, which typically occur in the fourth and first quarters of the year for this segment.

Bookings for Specialty Semiconductors decreased by 5 days, from 111 days in Q3 2023 to 106 days in Q4 2023. Bookings for Performance Materials increased by 23 days, from 92 days in Q3 2023 to 115 days in Q4 2023. Bookings are calculated by adding revenues to the increase or decrease in backlog for the period divided by annualized revenue. As such, the increase or decrease in bookings is attributable to the same factors as the increase or decrease in backlog.

Q4 2023 vs. Q4 2022

Backlog on December 31, 2023, for Specialty Semiconductors decreased by 15 days compared to on December 31, 2022. The backlog for Performance Materials, represented 157 days, an increase of 33 days, compared to 124 days on December 31, 2022.

Bookings for Specialty Semiconductors decreased by 58 days for the same factors mentioned above, and increased by 9 days for Performance Materials, compared to the previous year quarter.

Expenses

(in thousands of U.S. dollars)	**Q4 2023**	Q4 2022	**FY 2023**	FY 2022
	$	$	**$**	$
Depreciation and amortization	**4,057**	4,051	**16,110**	17,732
SG&A	**8,699**	7,183	**29,410**	28,565
Share-based compensation expense (recovery)	**414**	(171)	**1,432**	999
Litigation and restructuring costs (income)	**458**	3,210	**(8,314)**	3,823
Impairment of non-current assets	**64**	-	**672**	12,478
Loss on disposal of property, plant and equipment	**-**	-	**1,051**	-
Loss on divestiture of subsidiary	**-**	7,834	**-**	7,834
Loss on disposal of assets held for sale	**-**	-	**-**	216
Financial expense	**2,490**	219	**8,698**	5,234
Income tax (recovery) expense	**(734)**	(292)	**3,275**	4,711
Total expenses	**15,448**	22,034	**52,334**	81,592

Depreciation and Amortization

Depreciation and amortization expenses in Q4 2023 and FY 2023 amounted to $4.1 million and $16.1 million, respectively, compared to $4.1 million and $17.7 million, respectively, for the same periods in 2022. The decrease in FY 2023 is mainly associated with the Company's divestiture of its Tilly, Belgium operations in Q4 2022.

SG&A

SG&A expenses in Q4 2023 and FY 2023 were $8.7 million and $29.4 million, respectively, compared to $7.2 million and $28.6 million, respectively, for the same periods in FY 2022. The increase in Q4 2023 is mainly explained by a punctual need for third-party support, while in FY 2023, the increase is mainly caused by inflation impacting various expenses partially mitigated by the Company's divestiture of its Tilly, Belgium operations in Q4 2022.

Share-based Compensation Expense (Recovery)

Share-based compensation expense in Q4 2023 amounted to $0.4 million, compared to a recovery of $0.2 million in Q4 2022. In FY 2023, share-based compensation expense amounted to $1.4 million, compared to $1.0 million in FY 2022.

Litigation and restructuring costs (income)

In Q4 2023, the Company recorded litigation and restructuring costs of $0.5 million consisting of severances and other related costs and a charge related to a non-trade receivable which became non recoverable during the quarter for an amount of $0.2 million.

In Q2 2023, the Company recorded a litigation and restructuring income of $8.8 million, which represented the amount received from the previous shareholder of AZUR, net of related expenses. The income was received as per stipulations of the share purchase agreement and is not related to AZUR's performance post-acquisition.

In Q4 2022 and FY 2022, the Company recorded litigation and restructuring costs of $3.2 million and $3.8 million, respectively. These costs include $2.6 million related to the divestiture of a subsidiary, $0.4 million for a site closure in Asia, $0.2 million due to a change to its senior executive management recorded in Q2 2022, and $0.4 million for the settlement of a contract by mutual agreement recorded in Q2 2022.

Impairment of Non-Current Assets

In Q2 2023, the Company recorded an impairment of non-current assets of $0.6 million in relation to PPE included within the Performance Materials segment, to reflect the assessment of the carrying value of production equipment following the Company's decision to switch to higher capacity production equipment.

In Q3 2022, the Company recorded an impairment of non-current assets of $7.1 million ($2.4 million for buildings, $4.6 million for machinery and $0.1 million for furniture and fixtures) under its Performance Materials segment to reflect the assessment of the carrying value of PPE following its intention to halt production at its manufacturing facility in Tilly, Belgium.

In Q1 2022, the Company recorded an impairment of non-current assets of $5.4 million ($5.1 million for customer relationships and $0.3 million for other intangibles) under its Specialty Semiconductors segment to reflect the assessment of the carrying value of intangible assets due to the impact of the Russia/Ukraine conflict on the Company's Russia-based customer relationships. The Company's initial assumptions regarding future cashflows from these customers are no longer supported given the international sanctions in place against Russia and the uncertainty related to, and the unknown duration of, the Ukraine/Russia conflict.

Loss on disposal of property, plant and equipment

In Q2 2023, the Company recorded a loss of $1.1 million on the disposal of a production equipment following a change in technical requirements and functionalities by the Company. The Company disposed of this production equipment in a non-monetary transaction with the supplier in exchange for a credit to be applied against future production equipment purchases.

Loss on Divestiture of Subsidiary

In Q4 2022, the Company divested its 100% interest in 5N Plus Belgium SA and recognized a loss on divestiture of $7.8 million. For more information, see the "Divestiture of 5N Plus Belgium SA" section.

Loss on Disposal of Assets Held for Sale

In Q3 2022, the Company recorded a loss of $0.2 million on the disposal of assets held for sale due to the planned relocation of operations to Canada from one of the Company's subsidiaries in Asia, announced in Q3 2020.

Financial Expense

Financial expense amounted to $2.5 million in Q4 2023, compared to $0.2 million in Q4 2022. The negative impact is partly due to interest income earned in Q4 2022, following the settlement of an international tax arbitration between two jurisdictions in which the Company operated. A foreign exchange and derivatives loss was recorded in Q4 2023, compared to a gain in the same period last year, which also contributed to the difference.

In FY 2023, financial expense amounted to $8.7 million, compared to $5.2 million in FY 2022. The increase is due to the significant increase in interest rates from the second half of FY 2022 against interest income earned following the settlement of an international tax arbitration in Q4 2022 described above.

Income Taxes

The Company reported earnings before income taxes of $1.6 million in Q4 2023 and $18.7 million in FY 2023. Income tax recovery in Q4 2023 and income tax expense in FY 2023 was $0.7 million and $3.3 million, respectively, compared to income tax recovery and income tax expense of $0.3 million and $4.7 million, for the respective periods of 2022. Both years were impacted by deferred tax assets applicable only in certain jurisdictions.

Liquidity and Capital Resources

(in thousands of U.S. dollars)	**Q4 2023**	Q4 2022	**FY 2023**	FY 2022
	$	$	**$**	$
Cash from operations before the following:	**5,883**	4,447	**32,051**	13,498
Net changes in non-cash working capital items	**5,891**	8,958	**(14,800)**	10,243
Cash from operating activities	**11,774**	13,405	**17,251**	23,741
Cash used in investing activities	**(8,097)**	(8,895)	**(12,362)**	(18,994)
Cash from (used in) financing activities	**1,029**	(2,308)	**(13,002)**	2,409
Effect of foreign exchange rate changes on cash and cash equivalents	**125**	317	**128**	(405)
Net increase (decrease) in cash and cash equivalents	**4,831**	2,519	**(7,985)**	6,751

In Q4 2023, cash generated by operating activities amounted to $11.8 million, compared to $13.4 million in Q4 2022. In FY 2023, cash generated from operating activities amounted to $17.3 million, compared to $23.7 million in FY 2022. The decrease in FY 2023 is mainly due to an increase in non-cash working capital to support growth in expected demand in 2024, partially mitigated by an increase in contributions of cash from operations of $18.6 million in FY 2023 before net change in non-cash working capital.

In Q4 2023, cash used in investing activities amounted to $8.1 million, compared to $8.9 million in Q4 2022. In FY 2023, cash used in investing activities amounted to $12.4 million, compared to $19.0 million in FY 2022. The decrease of $6.6 million in FY 2023 is mainly explained by the proceeds on settlement of an indexed deposit agreement which was amended during Q1 2023, resulting in a receipt of cash of $6.5 million, partially offset by increased additions to PPE of $1.2 million in 2023 and an increase in the Company's minority equity stake in Microbion Corporation ("Microbion") of $1.0 million. Compared to FY 2022, cash used in investing activities was impacted by the timing of additions to PPE, such as the St-Laurent project (Montréal, Canada), and cash disbursements associated with the divestiture of its Tilly, Belgium operations, partially mitigated by proceeds of $2.8 million on the disposal of assets held for sale in Q3 2022.

In Q4 2023, cash generated by financing activities amounted to $1.0 million, compared to cash used in financing activities of $2.3 million in Q4 2022. In FY 2023, cash used in financing activities amounted to $13.0 million, compared to cash generated from financing activities of $2.4 million in FY 2022. The variation of $15.4 million is mainly attributable to the reimbursements of $7.5 million in Q2 2023 and $5.0 million in Q3 2023 of the credit facility while the Company made a net drawdown of $5.0 million in FY 2022. In addition, the Company received cash from the issuance of common shares in FY 2023, while the principal elements of lease payments were similar for both periods.

Working Capital

(in thousands of U.S. dollars)	**As at December 31, 2023**	As at December 31, 2022
	$	$
Inventories	**105,850**	86,254
Other current assets	**76,113**	100,908
Current liabilities	**(81,807)**	(62,846)
Working capital[1]	**100,156**	124,316
Working capital current ratio[1]	**2.22**	2.98

The $24.2 million decrease in working capital, compared to December 31, 2022, is mainly attributable to higher current liabilities following the presentation of the subordinated term loan of $25.0 million maturing in March 2024 as a current portion of long-term debt in Q1 2023, net of lower trade and accrued liabilities. In addition, inventories increased by $19.6 million in FY 2023 to support demand while other current assets are lower by $24.8 million.

[1] These measures are not recognized measures under IFRS and do not have standardized meanings prescribed by IFRS and therefore may not be comparable to similar measures presented by other companies. See Non-IFRS Measures for more information.

Net Debt

(in thousands of U.S. dollars)	As at December 31, 2023	As at December 31, 2022
	$	$
Bank indebtedness	-	-
Long-term debt including current portion	108,500	121,000
Total Debt[1]	108,500	121,000
Cash and cash equivalents	(34,706)	(42,691)
Net Debt	73,794	78,309

Total debt stood at $108.5 million as at December 31, 2023, compared to $121.0 million as at December 31, 2022.

Net debt, after considering cash and cash equivalents, decreased by $4.5 million to $73.8 million on December 31, 2023, from $78.3 million on December 31, 2022.

Available Short-Term Capital Resources

(in thousands of U.S. dollars)	As at December 31, 2023	As at December 31, 2022
	$	$
Cash and cash equivalents	34,706	42,691
Available revolving credit facility	40,500	28,000
Available short-term capital resources	75,206	70,691

In June 2022, the Company signed a senior secured multi-currency revolving credit facility of $124.0 million maturing in April 2026 to replace its existing $124.0 million senior secured revolving facility maturing in April 2023. 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 U.S. dollars, Canadian dollars or Hong Kong dollars (up to $4.0 million). Drawings bear interest at either the Canadian prime rate, U.S. base rate, Hong Kong base rate or SOFR, 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, 2023 and December 31, 2022, the Company had met all covenants.

In February 2019, the Company signed a five-year subordinated term loan with Investissement Québec. The loan was disbursed in two tranches: the first tranche of $5.0 million on February 6, 2019, and the second tranche of $20.0 million on March 22, 2019. The two tranches of the term loan bear interest equivalent to the five-year U.S. dollar swap rate plus a margin of 4.19%, which equals to 6.82% and 6.64%, respectively. Under the terms of the loan, the Company is required to satisfy certain restrictive covenants as to financial ratios. As at December 31, 2023 and December 31, 2022, the Company had met all covenants.

Share Information

	As at February 27, 2023	As at December 31, 2023
Issued and outstanding shares	88,704,724	88,704,724
Stock options potentially issuable	1,365,162	1,365,162

[1] These measures are not recognized measures under IFRS and do not have standardized meanings prescribed by IFRS and therefore may not be comparable to similar measures presented by other companies. See Non-IFRS Measures for more information.

Restricted Share Unit and Performance Share Unit Plan

On November 4, 2015, the Company adopted a new Restricted Share Unit ("RSU") and Performance Share Unit ("PSU") Plan (the "RSU & PSU Plan") to replace the previous RSU Plan. The 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 RSU & PSU 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 2023, the Company granted 155,873 RSUs (2022 – 95,881), 111,458 RSUs were paid (2022 – 146,549) and 3,000 RSUs were forfeited (2022 – 13,110). On December 31, 2023, 319,896 RSUs were outstanding (2022 – 278,481).

No PSUs were granted or paid in FY 2023 and FY 2022 and 200,000 PSUs were cancelled in FY 2022. On December 31, 2023 and 2022, nil PSUs were outstanding.

Stock Option Plan

On April 11, 2011, the Company adopted a new stock option plan (the "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 on December 31, 2023, may be exercised during a period not exceeding six years from their date of grant. Unless the Board of Directors decides otherwise at its sole discretion, 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 (collectively the "optionee") and one year after the optionee's death, retirement or permanent disability, as the case may be, or prior to the expiration of the term of the option, whichever occurs earlier.

The following table presents information concerning all outstanding stock options:

	2023		2022	
	Number of options	**Weighted average exercise price**	Number of options	Weighted average exercise price
		CA$		CA$
Outstanding, beginning of year	**1,598,938**	**1.91**	825,968	2.46
Granted	**140,712**	**2.74**	772,970	1.33
Exercised	**(374,488)**	**2.28**	-	-
Outstanding, end of year	**1,365,162**	**1.90**	1,598,938	1.91
Exercisable, end of year	**458,454**	**2.10**	457,749	2.41

Off-balance Sheet Arrangements

The Company has few off-balance sheet arrangements since most of the leases are recognized on the consolidated statement of financial position following the adoption of the IFRS 16 – Leases, as at January 1, 2019. Any off-balance sheet arrangements consist of contractual obligations in the normal course of business.

The Company is exposed to currency risk on sales in euros and other currencies, as well as interest rate fluctuations on its credit facility, and, therefore, may periodically enter into foreign currency forward contracts and interest rate or foreign currency swap contracts to protect itself against interest rate and currency fluctuations. The reader will find more details related to these contracts in Notes 19 and 27 of the audited consolidated financial statements for the year ended December 31, 2023.

The following table reflects the contractual cash flows of the Company's financial liabilities as at December 31, 2023:

(in thousands of U.S. dollars)	Carrying amount	1 year	2 years	3 years	4 years	Over 5 years	**Total**
	$	$	$	$	$	$	**$**
Trade and accrued liabilities	37,024	37,024	-	-	-	-	**37,024**
Long-term debt	108,500	31,184	5,766	85,422	-	-	**122,372**
Lease liabilities	30,139	2,761	2,642	2,558	2,534	26,803	**37,298**
Total	175,663	70,969	8,408	87,980	2,534	26,803	**196,694**

Commitments

In the normal course of business, the Company contracted letters of credit for an amount of $0.6 million as at December 31, 2023 and $0.9 million as at December 31, 2022.

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 Event

In January 2024, the Company increased its minority equity stake in Microbion for an amount of $1.0 million. As at December 31, 2023, the Company's stake in Microbion was valued at $3.0 million.

Divestiture of 5N Plus Belgium SA

On December 19, 2022, the Company divested its 100% interest in 5N Plus Belgium SA, previously included within its Performance Materials segment, and recognized a loss on divestiture of $7.8 million. The decision to cease the production of lower margin products used in extractive and catalytic applications was made following a strategic review of the Company's operations. As part of the transaction, a provision of $2.6 million was recorded under Litigation and Restructuring costs in Q4 2022, of which 2.0 million euros or $2.1 million is held in escrow, to support the new owners to ensure site compliance with most recent environmental standards and other related costs. Prior to the divestiture, the Company recorded an impairment charge of $7.1 million on PPE in Q3 2022 following the announcement of its intention to halt production at its manufacturing facility in Tilly, Belgium.

If the Company's exit from the manufacturing of low margin extractive and catalytic products and related divestiture of 5N Plus Belgium SA had been completed as of January 1, 2022, the yearly consolidated Adjusted EBITDA would have been higher by approximately $2.0 million, and revenue under Performance Materials segment lower by $39.3 million.

Governance

As required by Multilateral Instrument 52-109 of the Canadian Securities Administrators ("MI 52-109"), 5N+ has filed certificates signed by the Chief Executive Officer ("CEO") and the Chief Financial Officer ("CFO") 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 CEO and the CFO have designed disclosure controls and procedures ("DC&P"), 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 of the effectiveness of the Company's disclosure controls and procedures was carried out under the supervision of the Chief Executive Officer and Chief Financial Officer. 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 CEO and the CFO have also designed internal controls over financial reporting (ICFR) or have caused them to be designed under their supervision, using the Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 COSO Framework), to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS Accounting Standards.

Due to their intrinsic limitations, DC&P and ICFR only provide reasonable assurance and may not prevent or detect all misstatement or errors.

Changes in Internal Control over Financial Reporting

No changes were made to the ICFR during the fiscal year ended December 31, 2023, that have materially affected, or are reasonably likely to materially affect, the ICFR.

Adoption of New Accounting Standards and Future Changes in Accounting Policies

Adoption of new accounting standards

For the year ended December 31, 2023, the Company evaluated the new accounting standards issued and effective under IFRS Accounting Standards and determined that they have no significant impact to its financial statements.

Future Changes in accounting policies

As at December 31, 2023, the Company evaluated the new accounting standards issued but not yet effective under IFRS Accounting Standards and determined that none are applicable to the Company based on its current operations.

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 consolidated 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 ("CGU") carrying amount exceeds its recoverable amount, which is the higher of fair value less cost of disposal and value in use.

To determine the recoverable amount, significant judgement is required as management must estimate expected future cash flows from the asset or CGU and it must determine 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. These key assumptions relate to future events and circumstances. The actual results will vary and may cause adjustments to the Company's assets in future periods. In most cases, determining the applicable discount rate involves estimating the appropriate adjustment to market risk and to asset-specific risk factors.

Inventories

Inventories are carried 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.

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 18 of the audited consolidated financial statements for the year ended December 31, 2023.

Related Party Transactions

The Company's related parties are its directors and executive members. Transactions with these related parties are described in Note 26 in the 2023 audited 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's financial instruments and their fair value is discussed in Note 19 – Fair Value of Financial Instruments of the audited consolidated financial statements for the year ended December 31, 2023.

The fair value of the financial instruments was as follows:

(in thousands of U.S. dollars)	**2023**	2022
	$	$
Total return swap	**591**	-
Indexed deposit agreement	**-**	5,517
Investment in equity instruments	**3,000**	2,000
Restricted investment	**603**	620

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 27 of the audited consolidated financial statements for the year ended December 31, 2023.

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 is made of subordinated debts 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 $0.8 million on the Company's earnings before income tax on a twelve-month horizon based on the balance outstanding on December 31, 2023.

Foreign Currency

Foreign currency risk is defined as the Company's exposure to a gain or a loss in the value of its financial instruments as a result of fluctuations in foreign exchange rates. The Company is exposed to foreign exchange rate variability primarily in relation to certain sales commitments, expected purchase transactions, certain local operating expenses and debt denominated in a foreign currency. In addition, these operations have exposure to foreign exchange rates primarily through cash and cash equivalents and other working capital accounts denominated in currencies other than their functional currencies.

In addition, the Company will occasionally enter into foreign exchange forward contracts to sell U.S. 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 U.S. dollars. As at December 31, 2023, the Company had no foreign exchange contracts outstanding.

The following table summarizes in U.S. dollar equivalents the Company's major currency exposures as at December 31, 2023:

(in thousands of U.S. dollars)	CA$	EUR	GBP	HKD	MYR	Other
	$	$	$	$	$	$
Cash and cash equivalents	489	1,999	67	34	36	9
Accounts receivable	1,662	6,594	-	-	1	-
Derivative financial assets	591	-	-	-	-	-
Other current assets	-	2,212	-	-	-	-
Other non-current assets	-	603	-	-	-	-
Trade and accrued liabilities	(12,987)	(9,349)	(436)	(116)	(166)	(55)
Lease liabilities	(6,360)	(297)	-	(69)	-	-
Net financial assets (liabilities)	(16,605)	1,762	(369)	(151)	(129)	(46)

For the Company's subsidiaries with a functional currency other than the U.S. dollar, their exposures of financial assets and financial liabilities denominated in U.S. dollars are $10.4 million and $0.5 million, respectively, with a net position of $9.9 million. A strengthening or weakening in the exchange rate between the functional currencies of these subsidiaries and the U.S. dollar of five-percentage points results in a decrease or increase of $0.5 million to earnings before income tax.

The following table shows the impact on earnings before income tax of a five-percentage point strengthening or weakening of foreign currencies against the U.S. dollar as at December 31, 2023 for the Company's financial instruments denominated in non-functional currencies:

(in thousands of U.S. dollars)	CA$	EUR	GBP	HKD	MYR	Other
	$	$	$	$	$	$
5% Strengthening	(830)	88	(18)	(8)	(6)	(2)
5% Weakening	830	(88)	18	8	6	2

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. Historically, the Company has not incurred any significant losses in respect of its trade receivables. Therefore, the loss allowance at the end of each period and the change recorded for each period is insignificant.

As at December 31, 2023 and 2022, the Company had a loss allowance of $nil million and $0.1 million, respectively. The loss allowance 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

In the normal course of business, the Company is subject to a number of risk factors which may limit its ability to execute on its strategy and achieve its long-term growth objectives. Management identifies these risks and implement strategies to minimize their impact on the Company's performance. The Audit Committee together with the Corporate Internal Audit and site leadership teams have the mandate to review all business risks semi-annually. The risks and risk reduction measures are presented to the Audit Committee and the Board of Directors on an ongoing basis. The realization of the risks described in any of the following risk factors could have a material adverse effect on the Company's business, results of operations and financial condition.

Risks and uncertainties not presently known to the Company or that the Company currently considers as not material could become material in the future or impair its business operations or cause a decline in the price of shares.

Global Economic Conditions

The Company operates in a volatile economic environment. Current global economic conditions, which have been subject to increased volatility and contraction in credit markets, may impact the Company's access to public financing, its ability to obtain equity or debt financing on favourable terms and the valuation of the Company's securities. As a result, if unemployment, interest or inflation rates fluctuate substantially or increase to significant levels, they could have an impact on the Company's operating activities, financial position and profitability. In addition, the Company is exposed to market risk related to the current global inflationary situation, as the various environmental, social, political, economic and health factors had significant consequences on the world economy. In order to reduce inflation, several central banks are now tightening their monetary policies, which has an impact on interest rates, foreign currency exchange rates and economic development. The risks of recession in one or several of the countries where the Company operates are growing and could have an adverse impact on the Company's net earnings, financial position or cash flows.

International Operations

The Company operates in several countries, including China and Laos, and as such, faces risks associated with international business activities. The Company could be significantly affected by such risks, which include, but are not limited to, the integration of international operations, challenges associated with dealing with numerous legal and tax systems, changes in policy that alter regulations impacting the Company's operations, the potential for volatile economic and labor conditions, political instability, foreign exchange, expropriation, changes in taxes, and other regulatory costs. Although the Company operates primarily in countries with relatively stable economic and political climates, there can be no assurance that its business will not be adversely affected by the risks inherent in international operations.

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

- fires, pandemics (including regional and global infectious diseases), extraordinary weather conditions, or natural disasters, such as hurricanes, tornadoes, floods, tsunamis, typhoons and earthquakes;
- political instability, social and labor unrest, war or terrorism;
- disruptions in port activities, shipping and freight forwarding services;
- interruptions in the availability of basic services and infrastructure, including power and water shortages;
- changes in a specific country's or region's economic conditions, such as a recession;
- new certification requirements;
- significant fluctuations in currency exchange rates;
- the invasion of Ukraine by Russia;
- the current conflict in Israel and Gaza Strip;
- new trade barriers, including import and export imposed restrictions;
- the imposition of tariffs on its products or input; and
- change to legal, political, social, cultural, tax or other regulatory requirements.

The Company's insurance programs do not cover every potential loss associated with its operations, including potential damage to assets, lost profits and liability that could result from the aforementioned conditions or events. In addition, its 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 its 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 the Company. 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, imposing import and export restrictions, 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 the Company's 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 business, lead to reduction in demand for its products, impact sourcing of materials and products out of China, and adversely affect the Company's competitive position.

Environmental Regulations

The Company's 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 local, provincial, national, 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 its reputation; stopping it from pursuing operations at one of its facilities; being subject to substantial fines, penalties, criminal proceedings, third party property damage or personal injury claims, clean-up costs, capital expenditures or other costs; increasing the costs of development or production and litigation or regulatory action against it, and materially adversely affecting its business, results of operations or financial condition. Environmental legislation is evolving in a manner that will require stricter standards and enforcement, and a heightened degree of responsibility for the Company and its officers, directors and employees. Future changes in applicable environmental and health and safety laws and regulations could substantially increase costs and burdens to achieve or maintain compliance or otherwise have an adverse impact on its business, results of operations or financial condition.

The Company has incurred and will continue to incur capital expenditures to comply with environmental laws and regulations. Exceedances in wastewater discharges and air emissions generated by some Company facilities over the limits prescribed in applicable laws and permits have been registered in the past. At such facilities, the Company is collaborating with governmental authorities and implementing various measures including upgrading equipment to ensure compliance. Management believes that dealing with these environmental compliance issues will not have a material effect on the Company's earnings or competitive position during fiscal 2024. 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 its business, results of operations and financial condition.

Crisis and Climate Change Management

Unexpected events including geopolitical crises, pandemic and epidemic outbreaks, catastrophes and natural disasters, such as extreme and increasingly frequent weather-related disasters linked to climate change, could have a negative impact on the continuation of the Company's operations as well as its suppliers.

Environmental, Social and Governance (ESG) Considerations

The Company could be subject to growing stakeholder expectations as it relates to ESG factors, including from investors, who are increasingly placing a greater emphasis on ESG factors when assessing investment options. Future investments made in the Company, or future partnerships or business relations made with the Company may depend on various ESG standards and failure to meet evolving standards may impact the Company's reputation and ability to access capital.

Safety Risks and Hazards

The Company's health, safety and wellbeing systems, processes and policies are aimed at reducing risks to employees, subconsultants and others; however, work sites can put employees and others in proximity with large equipment, moving vehicles, dangerous processes or highly regulated materials in challenging or remote locations which may increase the risk to health and safety. Failure to implement or follow appropriate safety procedures by the Company or others could result in personal injury, illness or loss of life to people, or environmental and other damage to the Company's property or the property of others, or in regulatory fines or civil suits.

Prolonged Armed Conflict in Ukraine

The outbreak of war in Ukraine has deeply disturbed the global economy and the outcome of the ongoing conflict remains uncertain at this time. Although AZUR had sales in Russia in the past, the amount of such sales is not material to the Company as a whole. A prolonged armed conflict in Ukraine or an expansion of the armed conflict to other European countries could have a negative effect on the European and global economies. As well, Russia is a major exporter of oil and natural gas. Any disruption of supplies of oil and natural gas from Russia could have a significant adverse effect on the European and world economies. All the foregoing factors could potentially have a negative impact on the Company's sales and results of operations.

Disease Outbreaks

The local or worldwide outbreak of a disease, a virus, including, but not limited to, the COVID-19 pandemic or any other contagious disease and government actions to address them, could have an adverse impact on the Company's operations, operating results and financial position. While it is sudden, its impact on economic cycles can give rise to unfavourable temporary disruptions in the market where the Company operates as well as on its internal structure, such as plant closures, shortages of raw materials and labour, and in supply chains and distribution channels.

Availability and Retention of Qualified Employees

The Company relies on the expertise and know-how of its personnel to conduct its operations. The loss of any member of its team could have a material adverse effect on it. Its future success also depends on its ability to execute succession plans, attract and retain key employees, train, retain and successfully integrate new talent into its management and technical teams. Recruiting and retaining talented personnel, particularly those with expertise in the specialty metals industry and refining technology is vital to its success and may prove difficult. The Company cannot provide assurance that it will be able to attract and retain qualified personnel when needed, especially in light of the current labour shortage affecting several markets in which it operates. If the Company is unable to recruit and retain additional qualified personnel in the future, its business, financial condition and operating results could be adversely affected.

Collective Agreements

A portion of the Company's workforce is unionized, and it is party to collective agreements that are due to expire at various times in the future. If it is unable to renew these collective agreements on acceptable 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 lockouts, potentially affecting its performance.

Litigation Risks

The Company may be subject to a variety of civil or other legal proceedings, with or without merit. Although the Company establishes provisions for such litigation, there can be no assurance that the provisions for all claims correspond to the settlement amount. A significant judgment against the Company or the imposition of a significant fine or penalty could have a material adverse effect on its business, financial condition and results of operations.

Risks Associated with our Growth Strategy

The Company's strategic plan is designed to enhance profitability while reducing earnings volatility, delivering quality growth from existing growth initiatives, new products introduction, and future M&A opportunities. There can be no assurance that the expected benefits will materialize or 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 its control. The Company will incur costs in pursuing any particular opportunity, which may be significant.

Competition

The Company is a leading producer of specialty semiconductors and performance materials with a limited number of competitors, few of which are as fully integrated as it is or have a similar range of products. Accordingly, they have limitations to provide the same comprehensive set of services and products as 5N+ does. 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 its customers who could decide to backward integrate. Greater competition could have an adverse effect on the Company's revenues and operating margins if its competitors gain market share and it is unable to compensate for the volume lost to competition.

Commodity Price

Commodity prices affect the costs and the price the Company pays for, and availability of, various inputs fluctuate due to numerous factors beyond its control, including political and economic conditions, currency exchange rates, inflation or deflation, global supply and demand for metal products, fluctuations in the value of the U.S. dollar and foreign currencies, speculative trading, trade sanctions, tariffs, labour costs, competition, over capacity of producers and price surcharges. Fluctuations in availability and cost of inputs may materially affect its 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 the Company is not able to pass on any increases, its business, financial condition, results of operations and cash flows may be materially adversely affected.

Sources of Supply

The Company may not be able to secure the critical raw material feedstock on which it depends for its operations and there can be no assurance that the prices of such critical feedstock will not rise dramatically. It currently procures raw materials from a number of suppliers with which it has had long-term commercial relationships. The loss of any one of these suppliers or a reduction in the level of deliveries to it may reduce production capacity and impact deliveries to customers. This would, in turn, negatively impact its sales, net margins and may lead to liabilities with respect to some of its supply contracts.

In addition, supplemental supply-chain challenges created by the economic conjecture following the COVID-19 global pandemic and most recent geo-political instability and conflicts, could negatively affect the Company's general procurement through longer delays of transportation or through an increase in prices to obtain supplies. This may adversely affect the business, financial condition and operating results of the Company.

Canada has enacted the *Act to enact the Fighting Against Forced Labour and Child Labour in Supply Chains Act and to amend the Customs Tariff* ("Act"), which came into effect on January 1, 2024. The Act requires the Company to examine its supply chains and produce annual reports, to be published on the Company's website and submitted to the Minister of Public Safety and Emergency Preparedness, disclosing measures and steps it has taken to prevent and reduce the risk that forced labour or child labour is being used in its supply chains. Compliance with the Act may result into increased costs and failure to comply with the Act could have a material adverse effect on the Company's reputation, business, results of operations and financial condition. Despite our effort to take increased actions to ensure our entire supply chain is free of any forced labour, there is nonetheless a risk of forced labour on products we source from third parties where we may not have complete visibility into their supply chain. As a result, the Company may face regulatory challenges in complying with applicable sanctions and trade regulations and reputational challenges with various stakeholders if we are unable to sufficiently verify the origins for the material sourced.

Protection of Intellectual Property

Protection of the Company's proprietary processes, methods and other technologies is important to its business. The Company relies on international patents as well as trade secrets and employee confidentiality agreements to safeguard its intellectual property. The Company has deliberately chosen to limit its patent position for certain intellectual properties to avoid disclosing valuable information. Failure to protect and monitor the use of its existing intellectual property rights could result in the loss of valuable technologies and processes. There can be no assurance that its confidentiality agreements will provide meaningful protection for its intellectual property rights or other proprietary information in the event of any unauthorized use or disclosure or that it will be able to meaningfully protect our trade secrets.

Inventory Price

The Company may be subject to risk associated with the value of our inventories in relation to the market price of such inventories. The highly illiquid nature of many of its inventories may increase such risk. The Company relies on a combination of standard risk measurement techniques, such as value at risk as well as a more empirical assessment of the market conditions to manage inventory levels. Decisions on appropriate physical stock levels are taken by considering both the value at risk calculations and the market conditions.

Business Interruptions

The Company may incur losses resulting from business interruptions due to equipment failure, power loss, fire or water damage, and similar events beyond its control. In many instances, especially those related to its long-term contracts, it has contractual obligations to deliver product in a timely manner. Any disruption in its activities which leads to a business interruption could harm its customers' confidence level and lead to the cancellation of contracts and legal recourse against it. Although the Company believes that it has taken the necessary precautions to avoid business interruptions and carry all-risk business interruption insurance to protect its assets and business, it could still experience interruptions which would adversely impact production activities and financial results.

Loss of an Important Customer

The loss of any large customers, unanticipated demand fluctuations from these customers, or the inability of these customers to perform under their contracts, could significantly reduce the Company's revenue and negatively impact its results of operations.

Changes to Backlog

The Company cannot guarantee that the revenues projected in its backlog at any given time will be realized or that they will perform as expected with respect to margin. In addition, contract delays, suspensions, terminations, cancellations, reductions in scope or other adjustments may occur from time to time due to considerations beyond the Company's control and may have an impact on the value of reported backlog with a corresponding adverse impact on future revenues and profitability.

Acquisition Risk

The Company completed the acquisition of AZUR in November 2021 and may, from time to time, acquire or propose to acquire other companies. The Company's inability to properly integrate acquired companies, unanticipated acquisition costs, unforeseen delays and unknown liabilities associated with acquisitions, the potential loss of key employees following acquisitions, challenges with the integration of new operations and new personnel, the diversion of management's time and focus from other business concerns, opportunities and operational matters to work on acquisitions or integrate acquisitions, the loss of momentum in ongoing operations and disruptions to operations, possible inconsistencies in procedures and policies among the combined companies, and the need to implement new accounting, information technology, human resources or other administrative systems, may each materially and adversely affect the Company's business, results of operations or financial condition.

Systems, Network Infrastructure and Data Failure, Interruption and Breach

The Company's operations rely on information systems, communications technology, business and other technology applications, including global and regional networks, complex server infrastructure and operating systems, to operate properly. If it is unable to continually maintain software and hardware, effectively upgrade its systems and network infrastructure, and take other steps to improve the efficiency and protect its systems, the Company's operation systems could be interrupted or delayed. The same applies if its network, communication and operations systems are damaged or interrupted by natural disasters, telecommunications failures, acts of war or terrorism, computer viruses, sabotage, human errors, physical or electronic security breaches, or similar events or disruptions. The Company also faces the threat of unauthorized system access, computer hackers, malicious code and organized cyber-attacks. Following the pandemic and the lifting of COVID-19 restrictions, there a significant number of employees who continue to work remotely, which could contribute to an increase in cyber-attack attempts.

Executive management consultations are held regularly to monitor the progress of various cybersecurity projects, review significant incidents and review various security-related performance indicators. Executive management reports on its work to the members of the Board of Directors on a biannual basis. The Corporate IT function sets up and coordinates prevention, detection, and remediation measures in the area of cybersecurity. Cybersecurity measures include, among others, setting up strong controls with respect to systems access, implementing information security awareness programs, and hiring specialized firms to carry out occasional intrusion tests.

Although the Company has not experienced any material losses relating to cyberattacks or other information security breaches in the past, there can be no assurance that the Company will not experience such losses in the future due to the evolving nature of these threats.

Privacy

Data privacy breaches could adversely affect the Company's results of operations and profitability. Personal privacy and data security have become significant issues in North America and Europe, and in many other jurisdictions in which it operates. The regulatory framework for privacy and security issues worldwide is rapidly evolving and it may prove to be difficult to comply with all applicable laws and regulations in Canada and other jurisdictions regarding privacy. Furthermore, local or foreign government bodies or agencies have in the past adopted, and may in the future adopt, laws and regulations affecting data privacy, all of which may be subject to invalidation by relevant foreign judicial bodies. Industry organizations also regularly adopt and advocate for new standards in this area.

Market Price of Common Shares

The common shares of the Company are traded on the Toronto Stock Exchange under the symbol ''VNP''. The market price of securities of many companies experiences wide fluctuations from time to time that are not necessarily related to the operating performance, underlying asset values or future growth prospects of such companies. There can be no assurance that fluctuations in the price of the common shares of the Company, which may result in losses for investors, will not occur.

Grants and other incentive programs

The reduction, elimination, or expiration of government subsidies, economic incentives, tax incentives, R&D and business development incentives, or other public policies could negatively impact the Company's financial performance.

Non-IFRS Measures

In this Management's Report, certain non-IFRS measures are used. The Company's management believes that these non-IFRS measures provide useful information to investors regarding the Company's financial condition and results of operations as they provide additional key metrics of its performance. These non-IFRS measures are not recognized under IFRS Accounting Standards, do not have any standardized meaning prescribed under IFRS Accounting Standards and may differ from similarly named measures as reported by other issuers, and accordingly may not be comparable. These measures should not be viewed as a substitute for the related financial information prepared in accordance with IFRS Accounting Standards.

Backlog represents the expected orders the Company has received, but has not yet executed, and that are expected to translate into sales within the next twelve months, expressed in dollars and estimated in number of days not to exceed 365 days. Bookings represent orders received during the period considered, expressed in number of days, and calculated by adding revenues to the increase or decrease in backlog for the period considered, divided by annualized year revenues. 5N+ uses backlog to provide an indication of expected future revenues in days, and bookings to determine its ability to sustain and increase its revenues.

EBITDA means net earnings (loss) before interest expenses, income tax expense (recovery), depreciation and amortization. 5N+ uses EBITDA because it believes it is a meaningful measure of the operating performance of its 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 is reconciled to the most comparable IFRS measure:

(in thousands of U.S. dollars)	**Q4 2023**	Q4 2022	**FY 2023**	FY 2022
	$	$	**$**	$
Net earnings (loss)	**2,284**	(8,146)	**15,399**	(22,999)
Interest on long-term debt, imputed interest and other interest expense	**2,129**	716	**8,834**	5,192
Income tax (recovery) expense	**(734)**	(292)	**3,275**	4,711
Depreciation and amortization	**4,057**	4,051	**16,110**	17,732
EBITDA	**7,736**	(3,671)	**43,618**	4,636

EBITDA margin is defined as EBITDA divided by revenues.

Adjusted EBITDA means operating earnings (loss) as defined before the effect of impairment of inventories, share-based compensation expense (recovery), litigation and restructuring costs (income), impairment of non-current assets, loss on disposal of property, plant and equipment, loss on divestiture of subsidiary, loss on disposal of assets held for sale, and depreciation and amortization. 5N+ uses Adjusted EBITDA because it believes it is a meaningful measure of the operating performance of its 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 EBITDA and Adjusted EBITDA margin are reconciled to the most comparable IFRS measure:

(in thousands of U.S. dollars)	**Q4 2023**	Q4 2022	**FY 2023**	FY 2022
	$	$	**$**	$
Revenues	**65,063**	61,042	**242,371**	264,223
Operating expenses	**(61,023)**	(69,261)	**(214,999)**	(277,277)
Operating earnings (loss)	**4,040**	(8,219)	**27,372**	(13,054)
Share-based compensation expense (recovery)	**414**	(171)	**1,432**	999
Litigation and restructuring costs (income)	**458**	3,210	**(8,314)**	3,823
Impairment of non-current assets	**64**	-	**672**	12,478
Loss on disposal of property, plant and equipment	**-**	-	**1,051**	-
Loss on divestiture of subsidiary	**-**	7,834	**-**	7,834
Loss on disposal of assets held for sale	**-**	-	**-**	216
Depreciation and amortization	**4,057**	4,051	**16,110**	17,732
Adjusted EBITDA	**9,033**	6,705	**38,323**	30,028
Adjusted EBITDA margin percentage	**13.9%**	11.0%	**15.8%**	11.4%

Adjusted operating expenses means operating expenses before impairment of inventories, share-based compensation expense (recovery), litigation and restructuring costs (income), impairment of non-current assets, loss on disposal of property, plant and equipment, loss on divestiture of subsidiary, loss on disposal of assets held for sale, and depreciation and amortization. 5N+ uses Adjusted operating expenses to calculate Adjusted EBITDA. 5N+ believes it is a meaningful measure of the operating performance of its ongoing business. The definition of this non-IFRS measure used by the Company may differ from that used by other companies.

Adjusted operating expenses are reconciled to the most comparable IFRS measure:

(in thousands of U.S. dollars)	**Q4 2023**	Q4 2022	**FY 2023**	FY 2022
	$	$	**$**	$
Operating expenses	**61,023**	69,261	**214,999**	277,277
Share-based compensation (expense) recovery	**(414)**	171	**(1,432)**	(999)
Litigation and restructuring (costs) income	**(458)**	(3,210)	**8,314**	(3,823)
Impairment of non-current assets	**(64)**	-	**(672)**	(12,478)
Loss of disposal of property, plant and equipment	**-**	-	**(1,051)**	-
Loss on divestiture of subsidiary	**-**	(7,834)	**-**	(7,834)
Loss on disposal of assets held for sale	**-**	-	**-**	(216)
Depreciation and amortization	**(4,057)**	(4,051)	**(16,110)**	(17,732)
Adjusted operating expenses	**56,030**	54,337	**204,048**	234,195

Adjusted net earnings (loss) means the net earnings (loss) before the effect of impairment of inventory, share-based compensation expense (recovery), litigation and restructuring costs (income), impairment of non-current assets and loss on disposal of property, plant and equipment, loss on divestiture of subsidiary, loss on disposal of assets held for sale, net of the related income tax expense (recovery). 5N+ uses adjusted net earnings (loss) because it believes it is a meaningful measure of the operating performance of its ongoing business without the effects of unusual expenses or income. The definition of this non-IFRS measure used by the Company may differ from that used by other companies.

Basic adjusted earnings (loss) per share means adjusted net earnings (loss) divided by the weighted average number of outstanding shares. 5N+ uses basic adjusted earnings (loss) per share because it believes it is a meaningful measure of the operating performance of its ongoing business without the effects of unusual expenses or income. The definition of this non-IFRS measure used by the Company may differ from that used by other companies.

Adjusted net earnings (loss) and Basic adjusted earnings (loss) per share are reconciled to the most comparable IFRS measures:

(in thousands of U.S. dollars, except per share amounts and number of shares)	**Q4 2023**	Q4 2022	**FY 2023**	FY 2022
	$	$	**$**	$
Net earnings (loss)	**2,284**	(8,146)	**15,399**	(22,999)
Basic earnings (loss) per share	**$0.03**	($0.09)	**$0.17**	($0.26)
Reconciling items:				
Share-based compensation expense (recovery)	**414**	(171)	**1,432**	999
Litigation and restructuring costs (income)	**458**	3,210	**(8,314)**	3,823
Impairment of non-current assets	**64**	-	**672**	12,478
Loss on disposal of property, plant and equipment	**-**	-	**1,051**	-
Loss on divestiture of subsidiary	**-**	7,834	**-**	7,834
Loss on disposal of assets held for sale	**-**	-	**-**	216
Income tax recovery on taxable items above	**(226)**	(595)	**(854)**	(2,618)
Adjusted net earnings (loss)	**2,994**	2,132	**9,386**	(267)
Basic weighted average number of shares	**88,704,724**	88,330,236	**88,533,263**	88,330,236
Basic adjusted earnings (loss) per share	**$0.03**	$0.02	**$0.10**	$-

Adjusted gross margin is a measure used to monitor the sales contribution after paying cost of sales, excluding depreciation and inventory impairment charges. 5N+ also expressed this measure in percentage of revenues by dividing the adjusted gross margin value by the total revenue.

Adjusted gross margin is reconciled to the most comparable IFRS measure:

(in thousands of U.S. dollars)	**Q4 2023**	Q4 2022	**FY 2023**	FY 2022
	$	$	**$**	$
Total revenue	**65,063**	61,042	**242,371**	264,223
Cost of sales	**(49,677)**	(47,909)	**(184,833)**	(215,715)
Gross margin	**15,386**	13,133	**57,538**	48,508
Depreciation included in cost of sales	**3,189**	3,155	**12,656**	14,208
Adjusted gross margin	**18,575**	16,288	**70,194**	62,716
Adjusted gross margin percentage	**28.5%**	26.7%	**29.0%**	23.7%

Net debt is calculated as total debt less cash and cash equivalents. Any introduced IFRS 16 reporting measures in reference to lease liabilities are excluded from the calculation. 5N+ uses this measure as an indicator of its overall financial position.

The net debt to EBITDA ratio is defined as net debt divided by EBITDA.

Total debt and Net debt are reconciled to the most comparable IFRS measure:

(in thousands of U.S. dollars)	**As at December 31, 2023**	As at December 31, 2022
	$	$
Bank indebtedness	**-**	-
Long-term debt including current portion	**108,500**	121,000
Lease liabilities including current portion	**30,139**	30,402
Subtotal Debt	**138,639**	151,402
Lease liabilities including current portion	**(30,139)**	(30,402)
Total Debt	**108,500**	121,000
Cash and cash equivalents	**(34,706)**	(42,691)
Net Debt	**73,794**	78,309

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, it uses it as an indicator of its financial efficiency and aims to maintain it at the lowest possible level.

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

Working capital is reconciled to the most comparable IFRS measure:

(in thousands of U.S. dollars)	**As at December 31, 2023**	As at December 31, 2022
	$	$
Inventories	**105,850**	86,254
Other current assets excluding inventories	**76,113**	100,908
Current assets	**181,963**	187,162
Current liabilities	**(81,807)**	(62,846)
Working capital	**100,156**	124,316
Working capital current ratio	**2.22**	2.98

Additional Information

5N+'s 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.sedarplus.com.

Selected Quarterly Financial Information

(in thousands of U.S. dollars, except per share amounts)	**Dec 31, 2023**	Sept 30, 2023	June 30, 2023	March 31, 2023	Dec 31, 2022	Sept 30, 2022	June 30, 2022	March 31, 2022
	$	$	$	$	$	$	$	$
Revenue	**65,063**	62,946	59,075	55,287	61,042	66,372	72,388	64,421
EBITDA	**7,736**	9,582	17,530	8,770	(3,671)	1,751	6,739	(183)
Adjusted EBITDA	**9,033**	9,649	10,844	8,797	6,705	9,114	8,583	5,626
Net earnings (loss)	**2,284**	1,518	10,143	1,454	(8,146)	(6,968)	(2,130)	(5,755)
Basic earnings (loss) per share	**$0.03**	$0.02	$0.11	$0.02	($0.09)	($0.08)	($0.02)	($0.07)
Diluted earnings (loss) per share	**$0.03**	$0.02	$0.11	$0.02	($0.09)	($0.08)	($0.02)	($0.07)
Adjusted net earnings (loss)	**2,994**	1,742	3,187	1,463	2,132	520	(997)	(1,922)
Basic adjusted earnings (loss) per share	**$0.03**	$0.02	$0.04	$0.02	$0.02	$-	($0.01)	($0.02)
Cash from operations before net change in non-cash working capital items	**5,883**	5,064	15,227	5,877	4,447	2,473	3,778	2,800
Backlog	**292 days**	284 days	289 days	306 days	253 days	192 days	140 days	196 days

Net earnings (loss) are completely attributable to equity holders of 5N+.

Selected Yearly Financial Information

As at and for the years ended December 31 (in thousands of U.S. dollars except per share amounts)	**2023**	2022	2021
	$	$	$
Revenue	**242,371**	264,223	209,990
EBITDA	**43,618**	4,636	24,988
Adjusted EBITDA	**38,323**	30,028	28,239
Net (loss) earnings	**15,399**	(22,999)	3,110
Basic (loss) earnings per share	**$0.17**	($0.26)	$0.04
Diluted (loss) earnings per share	**$0.17**	($0.26)	$0.04
Adjusted net (loss) earnings	**9,386**	(267)	5,354
Basic adjusted net earnings per share	**$0.11**	$-	$0.06
Cash from operations before net change in non-cash working capital items	**32,051**	13,498	16,553
Backlog	**292 days**	253 days	221 days
Balance Sheet			
Total assets	**350,202**	347,985	373,590
Total non-current liabilities	**139,803**	172,363	172,284
Net debt	**73,794**	78,309	80,060
Shareholders' equity	**128,592**	112,776	136,247

Net earnings (loss) are completely attributable to equity holders of 5N+.