Q4 2020

Management Discussion and Analysis

Nanalysis Scientific Corp.

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READER ADVISORY

The Management's Discussion and Analysis ("MD&A") of the financial condition and results of operations of Nanalysis Scientific Corp. ("Nanalysis" or the "Company" or the "Corporation"), is prepared as at April 22, 2021. This discussion should be read in conjunction with the Corporation's audited Annual Consolidated Financial Statements for the year ended December 31, 2020 and 2019 and notes thereto, other information on Nanalysis is available on SEDAR at www.sedar.com and on the Corporation's website at www.nanalysis.com. This discussion should not be considered all-inclusive as it does not include all changes regarding general economic, political, governmental and environmental events.

This discussion should not be considered all-inclusive as it does not include all changes regarding general economic, political, governmental and environmental events. This MD&A contains certain statements that constitute forward-looking statements under the meaning of applicable securities laws. Please see "Forward-Looking Statement Advisory" on page 15 for a discussion regarding Nanalysis' use of such information. For the reader's reference, the definition, calculation and reconciliation of non-GAAP terms are provided in "Non-GAAP Terms" on page 14. Readers are cautioned that these non-GAAP terms should not replace net earnings (loss), earnings (loss) per share, purchases and proceeds on sale of property, plant and equipment and debt as indicators of GAAP performance.

This MD&A and the consolidated financial statements were reviewed by the Audit Committee of the Company's Board of Directors and approved by Nanalysis' Board of Directors on April 22, 2021. All dollar figures are in thousands of Canadian dollars, except per share amounts or unless otherwise stated.

OVERVIEW OF THE BUSINESS

Nanalysis Scientific Corp. is the ultimate parent in the group. In June 2019, the Company completed an amalgamation with Canvass Ventures in a reverse takeover ("RTO") and obtained a listing on the TSX-V as Nanalysis Scientific Corp (NSCI). The Company is headquartered in Calgary, Alberta, Canada and performs product development and manufacturing in its Calgary and Strasbourg facilities.

The Company's executive leadership is responsible for strategic decision making, resource allocation, and assessing financial performance and, as a group, is identified as our chief operating decision maker for the purposes of reporting segment information under International Financial Reporting Standards ("IFRS").

The Company is focused on the proliferation of magnetic resonance ("MR") technology into industrial, research and teaching markets through the release of accessible, affordable and automatable MR systems. By focusing on innovation in both method development and magnet and electronic design, the Company's product line addresses unmet needs of customers in a variety of applications, including mining, oil and gas, cannabis etc. The Company has a focused, direct sales force in the United States, Germany, France and Canada and works through a distribution channel of distributors and dealers in other geographical areas to ensure penetration of the current market in a simultaneous fashion. The Company's activities are carried out through three reportable segments: Nanalysis, RS2D and Corporate.

Nanalysis Corp. ("Nanalysis"): a subsidiary of the Company was founded in 2009 with the specific intent of developing the world's first portable magnetic resonance ("MR") spectrometer to address the three main limitations of this powerful magnetic resonance technique – affordability, accessibility and automatability. After approximately four years of development, Nanalysis began shipping their first commercial product in 2012. Since this time Nanalysis has expanded the functionality of this platform and launched the highest performing instrument available in the market to address the industrial market demands for increased performance metrics. Nanalysis Corp. is a provider of cutting edge, patent-protected magnetic resonance ("MR") technology to facilitate simple and rapid unknown chemical identification, quantification and diagnostics in a number of end markets including pharmaceutical, biotechnology, chemical, security, food, oil & gas and educational industries. Customers include Eli Lilly, Johnson & Johnson, Takeda Pharmaceutical, BASF, Hitachi Chemical, US Department of Agriculture, Lubrizol, Aramco Services, SABIC, Oxford University, Harvard University and many other Fortune 500 organizations. In 2018 the Company incorporated a wholly owned subsidiary in Germany, at which it conducts direct sales, marketing, technical support and channel management activities in the European region. The Company plans to open other international subsidiaries in upcoming years that will conduct similar activities in strategic geographical regions.

RS2D S.A.S. ("RS2D"): In March 2020, the Company acquired all outstanding shares of RS2D, a complementary technology company based in Strasbourg France that specializes in the development of cutting-edge MR electronics. Based on a single electronic board, RS2D has developed MR product lines in high-field ("HF") NMR and magnetic resonance imaging ("MRI") that can further advance Nanalysis' existing product line, while the new products round out the Company's magnetic resonance technology portfolio.

Corporate: This segment is the corporate entity of the company; included in Corporate is executive, legal, and other administrative costs.

BUSINESS ACQUSITION

On March 3, 2020, the Company acquired all of the outstanding shares of RS2D S.A.S. ("RS2D"), a technology company based in Strasbourg, France that designs and builds cutting-edge electronics components for precision analytical instruments. The base consideration paid for RS2D was $1,897K in cash and the issuance of 2.9 million common shares, which are subject to a three-year lock-up period restricting the sale of shares for specific periods. The former shareholders of RS2D may also receive an earnout over the three years to December 31, 2022, based on future revenue growth thresholds. As receipt of this earnout is not subject to any service requirement by the former shareholders, management concluded the earnout was part of the purchase consideration and assessed its fair value to be $Nil at the time of closing. Transaction costs for the acquisition were $268K.

The acquisition was accounted for as a business combination. The Company determined the purchase consideration to be $3.9 million, comprised of the following:

Purchase Price Allocation:

($000's)	
Cash	1,897
Common shares	2,030
Purchase consideration	3,927

SELECTED FINANCIAL INFORMATION

	Twelve months ended December 31		
($000's except share information amounts)	2020	2019	2018
Financial results			
Revenue	7,874	8,364	8,381
Gross profit[1]	5,167	6,060	5,398
Earnings (loss)	(3,678)	(1,660)	74
Share Information			
Earnings (loss) per share (basic and diluted)	(0.06)	(0.03)	-
Share Price (December 31)	0.48	0.48	N/A
Other Information			
Capitalized property plant and equipment	427	545	804
Capitalized development expenditures	2,474	2,594	1,444

($ 000's)	December 31, 2020	December 31, 2019	December 31, 2018
Financial Position			
Total assets	23,989	18,306	10,948
Total debt obligations (includes current portion)	3,024	1,507	997
Total liabilities	9,645	3,187	2,557
Net assets[2]	14,344	15,119	8,391

(1) Gross profit is a non-IFRS term and is defined as revenue less cost of products sold, see reconciliation on page 14 of this document.

(2) Net assets is a non-IFRS term and is defined as total assets less total liabilities.

FINANCIAL POSITION

At December 31, 2020, Nanalysis had $3,049K (December 31, 2019 - $8,534K) of working capital, including $3,158K (December 31, 2019 - $6,619K) in cash. The Company has an undrawn line of credit of $2,000K and $785K of available borrowing on the Western Economic Diversification Canada interest free loan. Nanalysis's business has been affected by COVID-19 and as such is eligible for a subsidy of 75% of employees' wages in Canada. During the twelve months ended December 31, 2020, the Company claimed $1,449K and to date has received $1,280K from the Canadian emergency wage subsidy ("CEWS"). Subsequent to the end of 2020 the Company received:

- $1,000K under the Regional Recovery Relief Fund, the loan bears interest at three percent above the Bank of Canada rate and is repayable in 35 consecutive monthly installments of $28K commencing January 1, 2023.

- On December 18, 2020 Nanalysis executed an original equipment manufacturing contract ("OEM") with a European Corporation. Per the agreement an initial licensing fee of $876K was due within 15 days of signing, this amount was received on January 11, 2021.

- On December 10, 2020 RS2D won a $1,200K non-repayable grant to further leverage its proprietary Magnetic Resonance Imaging (MRI) technology for smart NextGen clinical MRI systems. Pursuant to the grant and subsequent to year end RS2D received an initial payment on March 29, 2021 of $629K.

- On April 9, 2020, RS2D received $383K for their 2019 Credit impot Recherche.

Nanalysis will continue to monitor revenues and seek government for both Canadian and French operations where assistance is offered.

OVERALL PERFORMANCE

For the three months ended December 31, 2020, the Company reported consolidated revenue of $2,680K, an increase of $557K or 26% from the comparative period in 2019. The Company continues to be impacted by COVID-19. Travel restrictions have delayed the completion of several key contracts, but despite these challenges overall revenue increased in the fourth quarter of 2020 compared to the fourth quarter of 2019. The increase in revenue is due to RS2D revenue that did not exist in the prior year, as well as the first four shipments of Nanalysis' new flagship product the 100MHz. As at December 31, 2020 Nanalysis has $3,861K of backlog associated with the 100MHz, of which $1,544K has been prepaid by customers and is recorded in unearned revenue on the balance sheet.

Gross profit for three months ended December 31, 2020, was $1,750K (a margin of 65%) compared to gross profit of $1,693K (a margin of 79%) for the fourth quarter of 2019. The three months ended December 2019 had a cost recovery for inventory, resulting in increased margins for 2019.

The Company's comprehensive loss for the three months ended December 31, 2020, was $1,192K as compared to comprehensive income of $19K for the comparable period of 2019. The comprehensive loss for the three months ended December 31, 2020, was due to increased depreciation and amortization, increased stock-based compensation expense, increased research and development expenses, an RS2D earn-out payment, and increased operating expenses from RS2D. These have been partially offset by increased finance income, a deferred tax recovery, increased other comprehensive income and increased revenue.

For the twelve months ended December 31, 2020, the company reported consolidated revenue of $7,874K, a decrease of 6% from the $8,364K recognized for the twelve months ended December 31, 2019. The Company's comprehensive loss for the twelve months ended December 31, 2020 was $3,463K as compared to comprehensive loss of $1,660K in the comparable period of 2019. The decrease in revenue and increased comprehensive loss was due to the aforementioned impact of COVID-19, which caused delays in the development of the 100MHz and the completion of several significant contracts in the year.

DISCUSSION OF OPERATIONS

	Three months ended December 31			Twelve months ended December 31		
($000's)	2020	2019	($) Change	2020	2019	($) Change
Revenue	2,680	2,123	557	7,874	8,364	(490)
Cost of products sold	930	430	500	2,707	2,304	403
Gross profit (1)	1,750	1,693	57	5,167	6,060	(893)
Expenses						
Sales and marketing	1,022	865	157	3,239	2,453	786
General and adminstration	987	411	576	3,096	2,562	534
Research and development	437	-	437	476	-	476
Earnings (loss) before other items	(696)	417	(1,113)	(1,644)	1,045	(2,689)
Other items						
Business acquisition costs	-	(118)	118	268	1,303	(1,035)
Depreciation and amortization expense	430	168	262	1,681	775	906
Stock-based compensation	102	63	39	416	212	204
Finance expense (income)	(242)	(79)	(163)	(328)	(59)	(269)
Foreign exchange loss	2	67	(65)	18	213	(195)
RS2D earn-out	276	-	276	276	-	276
Earnings (loss) before tax	(1,264)	316	(1,580)	(3,975)	(1,399)	(2,576)
Deferred tax expense	(39)	297	(336)	(297)	261	(558)
Net earnings (loss)	(1,225)	19	(1,244)	(3,678)	(1,660)	(2,018)
Other comprehensive income	33	-	33	215	-	215
Total comprehensive income (loss)	(1,192)	19	(1,211)	(3,463)	(1,660)	(1,803)

(1) Gross profit is a non-IFRS term and is defined as revenue less cost of products sold, see reconciliation on page 14 of this document.

Revenue

The Company derives revenue from two operating segments, Nanalysis and RS2D. Nanalysis has been involved in the development, manufacturing, and sales of MR spectrometers from inception in 2009. As such, all revenue is related to product sales and extended warranties. Nanalysis does not engage in consulting services or any other revenue generating activity unrelated to product sales. RS2D is a technology company based in Strasbourg, France which specializes in the manufacturing of cutting-edge electronics components for precision MR technologies, their revenue is derived from product sales, licenses and contracted installation services of these products.

For the three months ended December 31, 2020 the Company reported consolidated revenue of $2,680K, a 26% increase from the $2,123K recognized for the comparable period December 31, 2019. The increase in revenue is due to RS2D revenue that did not exist in the prior year, as well as the first four shipments of Nanalysis new flagship product, the 100MHz.

For the twelve-month period revenue the Company reported consolidated revenue of $7,874K as compared to $8,364K for 2019. The decline in revenue was due to the aforementioned impact of COVID-19, this impacted the expected delivery date of Nanalysis' new product the 100MHz, with only four units being shipped as at December 31 2020. In addition, RS2D was impacted by travel restrictions, resulting in delaying the completion of several key contracts. Despite macro forces at play, the Company continues to see pre-orders for the 100MHz and a backlog of RS2D work resulting in an increase to unearned revenue balance from $616K as at December 31, 2019 to $2,868K at December 31, 2020.

Cost of products sold

Cost of sales for the Company includes the costs of manufacturing its products as well as the costs of servicing those products. The cost of sales for products comprises of raw materials, direct costs, direct labor, an allocation of overhead, freight charges, warranty and depreciation. The Company has consolidated manufacturing for both RS2D and Nanalysis to its facility in Calgary, Alberta.

Cost of products sold for the three months ended December 31, 2019 was $930K or 34 percent of revenue as compared to $430K or 20 percent of revenue for the same period of the prior year. The decrease to gross margin is due to reduced margins on RS2D revenue, bringing consolidated margins down on a comparative basis. Additionally Nanalysis had an expense recovery in 2019 related to warranty obligations.

Cost of products sold for the twelve months ended December 31, 2020, was $2,707K or 34 percent of revenue as compared to $2,304K or 28 percent of revenue for the comparable period of the prior year. The decrease in gross margin is due to the consolidation of RS2D, and cost recoveries in 2019.

Sales and marketing ("S&M")
S&M expenses include the salaries, benefits and expense of the sales, commissions, marketing, business development, travel costs, selling and marketing expenses.

S&M for the three months ended December 31, 2020 was $1,022K as compared to $865K for the same period of the prior year. The quarter over quarter increase is due to the acquisition of RS2D and increase to sales and marketing expense, stemming from additional headcount. These increased costs have been partially offset by reduced travel and tradeshow expenses due to COVID-19 restrictions.

For the year ended December 31, 2020, S&M was $3,239K as compared to $2,453K for the same period of the prior year. The increase for the period is due to the aforementioned headcount stemming from the acquisition of RS2D, partially offset by a decrease in travel and accommodation expenses due COVID-19. During the period sales staff focused on the selling of the new Nanalysis product, the 100MHZ, which as of December 31, 2020 saw presales of $3,861K, as such the sales and marketing expense is skewed as a percentage of revenue until product delivery in 2021.

General and administrative expenses ("G&A")
G&A includes the cost of maintaining a corporate office, all publicly traded company-related expenses as well as the G&A incurred with respect to the day-to-day operation of the Company.

For the three months ended December 31, 2020, G&A was $987K as compared to $411K for the same period of the prior year. The increase is due to increased headcount in G&A due to the acquisition of RS2D, increased audit fees, increased IT fees, increase legal and accounting fees associated with RS2D, these increases have been partially offset by savings on the consolidation of operations in Germany to the Strasbourg office in the latter part of the fourth quarter.

For the year ended December 31, 2020, G&A was $3,096K as compared to $2,562K for the same period of the prior year. The twelve months ended is due to the acquisition of RS2D from March 3rd 2020 – December 31, 2020 resulting in increased G&A head count and costs associated with the acquisition of RS2D (legal, office, accounting). In addition, the Company saw costs legal costs associated with the OTCQX listing and annual general meeting expenses that did not exist in 2019.

Amortization and depreciation of property, plant, equipment and intangibles
For the three months and year ended December 31, 2020 amortization and depreciation was $430K and $1,681K respectively, as compared to $168K and $775K for the three months and year ended December 31, 2019. The increase for both the three and twelve month periods is due the change in useful life estimate of the intangible asset associated with the 60MHz product from 11 years to 5 years, the amortization of the intangible asset acquired on the acquisition of RS2D and the commencement of amortization of the intangible asset associated with the 100MHz product over 10 years.

Finance income
For the three and twelve months ended December 31, 2020, finance income was $242K and $328K respectively, as compared to finance income of $79K and $59K for the comparable periods in 2019. The increased finance income for both three and twelve months is a result of accounting treatment of interest free government loans and the resulting income. Specifically there was a large adjustment in Q4 2020 resulting in a change to the discount value of WINN loan #2 with the resulting difference being recorded to finance income.

Foreign exchange
Foreign exchange gains or losses typically occur when the exchange rate changes between the time revenue or expenses are recognized and when the resulting receivable is collected, or invoice is paid. Nanalysis conducts the vast majority of its business in US dollars and Euro's.

RS2D earn-out
The Company accrued additional consideration of $276K for the shareholders of RS2D in the amount of $169K and 225,000 shares as part of the acquisition of RS2D, based on performance. The shares are locked up as follows (i) one-third (1/3rd) on the day they were attributed, subject to a 4 month hold period as defined in the applicable TSX Venture Exchange policies; (ii) one-third (1/3rd) on 31 January 2022; and (iii) the remaining proportion after 31 January 2023.

SUMMARY OF QUARTERLY RESULTS

The following table highlights revenue, cash used in operating activities, net earnings (loss) and earnings (loss) per share for the eight most recently completed quarters ended December 31, 2020.

	2020				2019			
($000's) (except per share information)	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Revenue	2,680	1,700	1,995	1,523	2,123	1,641	2,535	2,065
Cash (used in) generated from operating activities	(1,141)	518	(562)	563	5	204	225	347
Net earnings (loss) for the period	(1,225)	(1,099)	(525)	(910)	19	(298)	(1,177)	(201)
Earnings (loss) per share basic and diluted	(0.02)	(0.02)	(0.01)	(0.01)	0.00	(0.00)	(0.03)	(0.00)

- Q4 2020 marked the first quarter that that had revenue associated with the shipment of Nanalysis' new product, the 100MHz. The Company was able to ship out four systems at the end of Q4, this, coupled with performance of RS2D on contract work that they were able to complete despite delays due to COVID-19 travel restrictions, resulted in a 26% increase compared to Q4 2019.
- Q3 2020 continued to be impacted by COVID-19 as RS2D employees were unable to travel to complete installations, in addition Nanalysis saw lower sales due to its customers' capital budgets being impacted by COVID-19. While macro forces negatively impacted sales at both our Nanalysis and RS2D segments, the acquisition of RS2D earlier in 2020 and the inclusion of its revenue in Q3 2020 (versus none in 2019) enabled sales to show a 4% increase overall.
- Q2 2020 was impacted by COVID-19, as borders and businesses shut down, the Company was impacted significantly on revenue, but continued to take pre-orders for the new 100MHz product in spite of reduced sales activity for the quarter.
- Q1 2020 completed the acquisition of RS2D, results were impacted by COVID-19 as borders and businesses alike shut down in the month of March.
- Q4 2019 saw a reduction in revenue compared to Q4 2018 as customers await the release of the new 100MHz device.
- Q3 2019 experienced a slight reduction in revenue compared to Q3 2018. Despite reduced demand, the Company saw improved net comprehensive income due to recovery on previously expensed inventory.
- Q2 2019 revenue was 16% higher than Q2 2018. Total comprehensive loss for the period was primarily due to RTO transaction costs.
- Q1 2019 revenue was 28% higher than Q1 2018. US sales were 38% higher than in the comparable period in 2018, while overseas sales were 13% higher.

INVESTMENT IN INTANGIBLES AND DEVELOPMENT COSTS

(#000'S)	December 31, 2020	December 31, 2019
Net development costs	3,231	3,380
Less: government grants	(757)	(963)
Additions to intangibles	2,474	2,417

The Company is engaged in research and development activities and has internally generated intangible assets. Total development costs are reduced by government grants with the net difference being capitalized. Government grants consist of federal grants received under the Industrial Research Assistance Program ("IRAP") and scientific research and experimental development ("SRED") tax credits, as well as provincial assistance through the Alberta Innovates ("AI") Voucher Program and the Alberta Economic Development and Trade ("AEDT") Alberta-Germany Collaboration Fund for Product Development and Commercialization, the Alberta-Canada-France Joint Industrial R&D Projects Program and CEWS for business affected by COVID-19. During the twelve months ended the Company received $1,449K from CEWS, of which $595K is included as a government grant above, as it specifically relates to Nanalysis employees working on the development of the 100MHz product.

As at June 04, 2019 the Company ceased being a Canadian Controlled Private Corporation ("CCPC") and is no longer eligible for a cash refund from the federal government on SRED credits. Additionally as at January 1, 2020, the Alberta provincial government no longer provides SRED credits. The reduced SRED credits has resulted in increased additions to intangible assets.

The development costs for the twelve months of December 31, 2020, were associated with the new 100 MHz product, as well as on the evolution of the Company's technology platform for solutions being developed in publicly announced partnerships with Bosch, Sartec, and others.

LIQUIDITY & CAPITAL RESOURCES

($000's)	December 31, 2020	December 31, 2019
Shareholders Loans: original amount of $223k repayable in monthly blended installments of $6k commencing June 15, 2016 until May 15, 2020. Interest payable at 11.99% per annum. Secured with Makino machinery (F5).	-	28
Western Economic Diversification Canada (WINN #1) interest free loan $496K repayable in monthly installments of $8K commencing June 30, 2017, and maturing May 31, 2022. Any amounts in default will incur interest at the Bank of Canada's interest rate plus 3% compounded monthly. The obligation is recorded at its present value using a 7.04% discount rate. This loan is unsecured.	206	220
Western Economic Diversification Canada (WINN #2) interest free loan, repayable in monthly installments of $46K commencing February 1, 2022, and maturing January 31, 2027. Total value of this loan will be up to $2,773K. Any amounts in default will incur interest at the Bank of Canada's interest rate plus 3% compounded monthly. The obligation is recorded at its present value using a 6.0% discount rate. This loan is unsecured.	1,763	884
$6K loan for the purchase of equipment repayable in equal monthly installments of $109 over 56 months commencing April 28, 2018.	-	4
The Canada Emergency Business Account (CEBA) interest-free loans of $40K to small businesses and not-for-profits, to help cover their operating costs during a period where their revenues have been temporarily reduced. $30K is repayable on or before December 31, 2022. The obgligation is recorded at its present value using a 6.0% discount rate.	38	-
Prêt garanti par l'état – (PGE) is a Euro denominated loan granted by the French state to RS2D. Interest free loan for $156K, repayable in full on June 5, 2021, or at the election of the Company, monthly payments can be made to extend the loan until June 5, 2025. The obgliation is recorded as its present value using a 2.5% discount rate. This loan is unsecured.	145	-
Acquired debt from RS2D relating to a restructuring of RS2D. Procedure de sauvegarde, interest free Euro denominated loan repayable in annual payments due in March, payments are $159K, $239K, $287K, $298K, respectively, with the final payment maturing March 2024 The obglitation is recorded as its present value using a 2.5% discount rate.	872	-
	3,024	1,136
Less: current portion	209	116
Non-current portion of loans and borrowings	2,815	1,020

Credit Facility

The Company entered into a line of credit agreement with Scotiabank in 2019, pursuant to which it may borrow up to maximum of $2,000K ("the Credit Facility"). The borrowing base is calculated using the aggregate of 75% of eligible USD receivables, 85% of eligible CAD investment grade receivables, and 50% of eligible inventory. As of December 31, 2020, the Company had no drawings on the facility, the facility bears interest at prime plus 0.75 percent.

LEASE LIABILITIES

($000's)	December 31, 2020	December 31, 2019
Balance beginning of the year	371	-
Additions	62	481
Additions from RS2D acquisition (note 5)	524	-
Interest expense	55	25
Lease payments	(239)	(111)
Foreign exchange	34	-
Balance, end of the year	**752**	**370**
Current portion	225	132
Long-term portion	527	239

The Company and its subsidiaries have commitments under leases for buildings, office space and vehicles with varying terms that expire between 2020 and 2025, captured in the below value. The approximate undiscounted lease payments remaining are as follows:

($000's) Year	Lease Payments
2021	225
2022	230
2023	159
2024	106
2025	32
Thereafter	-
Balance at December 31, 2020	752

WORKING CAPITAL

($000's)	December 31, 2020	December 31, 2019	$ Change
Cash	3,158	6,619	(3,461)
Loans and leases	3,776	1,507	2,269
Net cash (debt) (2)	(618)	5,112	(5,730)
Working capital (1)	3,049	8,534	(5,485)

(1) Working capital is calculated as current assets less current liabilities.

(2) Net cash is a non-IFRS term and is defined as cash less loans and leases, see reconciliation on page 15 of this document.

At December 31, 2020 the Company had $3,049K of working capital (December 31, 2019, – $8,534K), which included $3,158K of cash (December 31, 2019 - $6,619K), of which $450K was denominated in U.S dollars and 331K in Euro's (December 31, 2019 $1,338K and 5K Euro, respectively). The primary reason for the decrease in working capital is due to the cash outflow of $1,209K for a portion of the purchase consideration for RS2D, cash outflows related to development costs of the 100MHz of $2,474K, and the consolidated loss for the twelve months ended December 31, 2020.

The Company's objectives when managing capital are to safeguard the Company's ability to continue as a going concern, and manage capital so that it can continue to provide returns for shareholders and benefits for other stakeholders through the development and sales of its spectrometers. The Company attempts to maximize return to shareholders by minimizing shareholder dilution.

The Company defines its capital as share capital, debt and contributed surplus. The company manages the capital structure and makes adjustments to it in light of changes in economic conditions and the risk characteristics of the underlying assets. The Company's liquidity needs in short term and long term can be sourced multiple ways including: funds from operations, available cash balances, new debt instruments, equity issuances and government funding. The Company monitors its financing requirements through regular forecasting of its cash position. Financing decisions are based on the timing and extent of expected operating and capital cash outlays.

The Company has financed its capital requirements primarily through loans and share issuances since inception. The Company may issue new securities. The Company is not subject to any externally imposed capital requirements.

FINANCIAL MANAGEMENT

($000's)	Twelve months ended December 2020	2019	$ Change
Cash generated provided by (used in):			
Operating activities	(623)	781	(1,404)
Investing activities	(4,110)	(3,139)	(971)
Financing activities	1,272	8,198	(6,926)
Increase (decrease) in cash	(3,461)	5,840	(9,301)

Cash flows from operating activities decreased for the twelve months ended December 31, 2020, from the same period in 2019 by $1,404K. The decrease is due to decreased earnings for the period, this has been partially offset by a period over period increase to working capital. The increase to working capital is due to increased collection of accounts receivables of $977K, increase payables of $585K, increased unearned revenue of $1,411K offset by a large purchase of inventory as Nanalysis has begun manufacturing of the 100MHz, resulting in an increased inventory balance of $1,616K, net change in working capital December 31, 2020 compares to December 31, 2019 is $232K.

Cash flows used in investing activities increased for the twelve months ended December 31, 2020, from the same period in 2019 by $971K. The increase is due to the purchase of RS2D, this has been partially offset by reduced purchases of property plant and equipment, as well as decreased additions to intangibles. The decrease to intangibles is due to the Canadian Emergency Wage Subsidy offsetting salaries that would have normally been capitalized to intangibles.

Cash flows provided by financing activities decreased for the twelve months ended December 31, 2020, from the same period in 2019 by $6,926K. The decrease is due to proceeds from financing with respect to the private placement and RTO that occurred in Q2 of 2019, increased funds from stock options exercised in 2019 and a larger repayment of finance leases in 2020. This has been partially offset by increased borrowings on debt and reduced repayment of debt due to COVID-19 payment deferrals.

SHARE CAPITAL

[a] Authorized
Unlimited number of common shares, without nominal or par value
Unlimited number of Class A voting preferred shares without par value
Unlimited number of Class B non-voting preferred shares without par value

[b] Issued
At December 31, 2020 Nanalysis had 66,037,000 common shares outstanding. There are 2.6 million shares under lock up issued for the acquisition of RS2D, these common shares are scheduled for release as follows: 870,000 on March 03, 2021, 870,000 on March 3, 2022 and 870,000 on March 3, 2023.

[i] During the year ended December 31, 2020 the Company issued the following common shares:
- 777,000 shares upon the exercise of options for cash consideration of $242K
- 2,900,000 shares issued at a price of $0.70 for the acquisition of RS2D

[ii] During the year ended December 31, 2019 the Company issued the following common shares (shares were converted at the exchange ratio of .55 for each previous share):
- 187,000 shares at $0.60 to directors as payment of director fees
- 110,000 shares at $0.60 for advisory services
- 71,500 shares at $0.60 to compensate certain employees as an incentive grant
- 8,333,000 units were issued, each unit gave the acquirer one share at $0.60 and a half warrant with an exercise price of $0.75, share issuance costs with respect to the financing were $324K, share purchase warrants are valued at $543K
- 2,500,000 units were issued in a private placement, each unit gave the acquirer one share at $0.60 and a half warrant with an exercise price of $0.75, the share purchase warrants are valued at $250K
- 2,277,500 shares at $0.60 to original Canvass shareholders
- 45,500 shares upon the exercise of warrants
- 1,391,500 shares upon the exercise of options

[c] Stock options
Stock option transactions and the number of stock options outstanding are summarized below:
The Company has a stock option plan that provides for the issuance of options to eligible persons. The option price under each option granted must be no less than the discount market price defined by the TSX-V. The term of the options must be no longer than 5 years and the directors determine the vesting period, which is typically 3 years. The maximum number of outstanding options must be no more than 10% of the issued and outstanding common shares at any point in time, the 10% includes both stock options and restricted share units in aggregate. The maximum number of outstanding options issued for investor relations must be no more than 2% of the issued and outstanding shares and the options issued investor relations must vest in stages over a 12 month period with no more than one quarter of the options vesting in any three month period.

	Number	Weighted Average Exercise Price $
Balance, December 31, 2018	**3,704,250**	**0.29**
Granted	1,872,500	0.62
Canvass options[(1)]	112,500	0.47
Exercised	(1,391,500)	(0.20)
Forfeitures	(404,250)	(0.40)
Balance, December 31, 2019	**3,893,500**	**0.46**
Granted Q1 2020	1,637,500	0.60
Granted Q3 2020	130,000	0.60
Exercised	(776,250)	(0.31)
Forfeitures	(197,500)	(0.60)
Balance, December 31, 2020	**4,687,250**	**0.53**

(1) Converted at an exchange ratio of 0.25, pursuant to the RTO

During the years ended December 31, 2020 and 2019, the Company recorded stock-based compensation of $416K and $212K, respectively, for stock options granted.

[d] Restricted Share Units ("RSU")

The RSU Plan was approved by the disinterested shareholders of the Company at the annual general and special meeting held on June 23, 2020. The fixed maximum number of the Company's Common Shares which may be available for issuance upon settlement of the RSUs issued under the RSU Plan is 1,000,000 Common Shares. In accordance with the policies of the TSX Venture Exchange, the maximum number of Common Shares which may be reserved for issuance under the RSU Plan and the Company's Stock Option Plan, in aggregate, cannot exceed 10% of the total number of the Company's issued and outstanding Common Shares. On July 1, 2020, the Company granted 40,000 RSU's to each independent director of the Company for a total of 160,000 RSUs. These RSUs vest in two stages, one half 18 months from the date of grant and one half 36 months from the date of grant. Each vested RSU entitles the holder to receive one common share of the Company. For the year ended December 31, 2020 $24K was recorded in stock-based compensation (2019 - $Nil).

[e] Warrants

As at December 31, 2020 the Company has 1,250,000 warrants outstanding (December 31, 2019 – 5,773,900). 4,523,900 warrants at an exercise price of $0.75 expired in 2020. The remaining warrants were issued in conjunction with a financing in 2019, at an exercise price of $0.75 and expire on June 6, 2021. The Company calculated the fair value of the share purchase warrants using the Black-Scholes pricing model to estimate the fair value of the warrants issued at the date of grant. The warrants were valued using a risk-free interest rate of 1.33% and volatility of 71%. The fair value of warrants issued is $250K.

BUSINESS RISK AND UNCERTAINTIES

The Company has exposure to the following risks from its use of financial instruments:

- Credit risk;
- Liquidity risk;
- Market risk; and
- Interest rate risk

Risk management framework

The Board of Directors has overall responsibility for the establishment and oversight of the Company's risk management framework. The Company's risk management policies are established to identify and analyze the risks faced by the Company, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Company's activities.

Credit risk

Credit risk is the risk of a financial loss to the Company if a counterparty to a financial instrument fails to meet its contractual obligations. The Company is exposed to credit risk in the event of non-performance by counterparties in connection with its cash, accounts receivable, and other receivables. The Company's maximum exposure to credit risk at December 31, 2020 is the carrying amount of cash, accounts receivable, and other receivables on the consolidated statements of financial position. The Company mitigates this risk by holding its cash in major Canadian financial institutions and performing credit enquiries on its customers.

Management regularly assesses the Company's exposure to credit risk and provides allowances for potentially uncollectible accounts receivable as they become known. Although collection of these receivables could be influenced by economic factors, management considers the risk of significant loss to be mitigated by the number, reputation and nature of the companies with which the Company does business. Trade accounts receivable are written off when there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery include, amongst others, the failure of the counterparty to engage in a repayment plan with the Company, and a failure to make contractual payments for a period of greater than 180 days past due. During the 12 months ended December 31, 2020, a bad debt of $107K was recognized as an expense (2019 - $8K).

Included in Other Receivables for 2020 is a SR&ED investment tax credit claim of $0.2 million and $0.8 million of CIR (2019 - $1.0 million SR&ED refund).

Liquidity risk
Liquidity risk is the risk that the Company will not be able to meet its obligations as they come due. As of December 31, 2020, the Company had working capital of $3,049K (December 31, 2019 - $8,534K). The Company's exposure to liquidity risk is dependent on its ability to capitalize on its research and development, ability to manufacture and deploy new products, sale of inventory, collection of accounts receivable and other receivables, the raising of funds to meet commitments, sustain operations, and continue research and development. The Company manages liquidity risk by management of working capital, cash flows, availability of borrowing facilities and share issuances.

Market risk
Market risk is the risk of loss that results from changes in market prices, market risk is comprised of foreign currency risk, interest rate risk and other price risks. The level of market risk to which the Company is exposed to depends on market condition, expectations of future price or market rate movements and the composition of the Company's financial assets and liabilities. The Company regularly monitors market risk exposure, tolerance and control processes in order to manage the exposure related to changes in market risk and to stay within acceptable market risk limits.

[i] Currency risk
The Company is exposed to the financial risk related to the fluctuation of foreign exchanges rates. The majority of the Company's sales are in U.S. dollars. The Company has not entered into foreign exchange derivative contracts.

As at December 31, 2020 and 2019, the Company had the following assets and liabilities denominated in U.S. dollars:

	December 31, 2020	December 31, 2019
($000's)	US$	US$
Cash	421	1,338
Accounts receivable	995	776
Accounts payable and accrued liabilities	(188)	(37)
Total	1,228	2,077

The above assets and liabilities were translated using an exchange rate of 1.27 at December 31, 2020 (2019 – 1.30). Based on the above net exposure as at December 31, 2020 and 2019, assuming that all other variables remain constant, a 10% appreciation or deterioration of the Canadian dollar against the U.S. dollar would result in a change of approximately $156K (December 31, 2019 - $269K) in the Company's net earnings/loss. Total sales in U.S. dollars for December 31, 2020 was $3.4 million (December 31, 2019 - $5.2 million), a 10% appreciation or deterioration of the Canadian dollar against the U.S. dollar would result in a change of approximately $431K (December 31, 2019 -$711K).

As at December 31, 2020 and 2019, the Company had the following assets and liabilities denominated in Euros:

($000's)	Euro (€)	Euro (€)
Cash	331	5
Accounts receivable	975	55
Inventory	228	-
Prepaids	67	-
Unearned revenue	(538)	-
Debt and lease liabilities	(980)	-
Accounts payable and accrued liabilities	(1,461)	(1)
Total	(1,378)	59

The above assets and liabilities were translated at 1.56 at December 31, 2020 (December 31, 2019 - 1.46). Based on the above net exposure as at December 31, 2020, assuming that all other variables remain constant, a 10% appreciation or deterioration of the Canadian dollar against the Euro would result in a change of approximately $215K (December 31, 2019 $9K) in the Company's other comprehensive income. Total sales in Euros for the year ended December 31, 2020 was €1.44 million, a 10% appreciation or deterioration of the Canadian dollar against the Euro would result in a change of approximately $225K.

[ii] Interest rate risk
Interest rate risk is the risk that the future cash flows of a financial instrument will fluctuate because of changes in the market interest rates. During the year ended December 31, 2020 and 2019, fluctuations in the market interest rates had no significant impact on its interest expense.

REVENUE AND SEGMENT INFORMATION

Twelve months ended December 31, 2020	Nanalysis	RS2D	Corporate	Total
Revenue	5,731	2,143	-	7,874
Operating earnings (loss)	558	(694)	(1,508)	(1,644)
Net loss	(160)	(1,068)	(2,450)	(3,678)
Depreciation and amortization	1,345	156	180	1,681
Capital expenditures	2,736	165	-	2,901
Total assets as at December 31, 2020	14,441	7,726	1,822	23,989

Twelve months ended December 31, 2019	Nanalysis	RS2D	Corporate	Total
Revenue	8,364	-	-	8,364
Operating earnings (loss)	1,211	-	(166)	1,045
Net income (loss)	(34)	-	(1,626)	(1,660)
Depreciation and amortization	775	-	-	775
Capital expenditures	3,139	-	-	3,139
Total assets as at December 31, 2019	13,138	-	5,168	18,306

GEOGRAPHIC LOCATION

During the twelve months ended December 31, 2020 the Company was not economically dependent on any customer accounting for more than 10% of revenue (December 31, 2019 – one customer accounting for 13%). The Company's revenues are allocated to geographic segments for the twelve months ended December 31, 2020 and 2019 as follows:

($000's)	December 31, 2020	December 31, 2019
United States of America	3,446	5,099
Europe	1,522	915
Canada	391	734
Asia	710	725
Other (Brazil, Chile, India, Mexico, Morocco, Nigeria)	1,805	891
Total	7,874	8,364

SUBSEQUENT EVENTS

Subsequent to year-end Nanalysis received $1.0 million, under the Regional Recovery Relief Fund, the loan bears interest at three percent above the Bank of Canada rate and is repayable in 35 consecutive monthly installments of $28K commencing January 1, 2023.

On December 18, 2020 Nanalysis executed an original equipment manufacturing contract ("OEM") with a European Corporation. Per the agreement an initial licensing fee of $876K was due within 15 days of signing, this amount was received on January 11, 2021.

On December 10, 2020 RS2D won a $1.2 million non-repayable grant to further leverage its proprietary Magnetic Resonance Imaging (MRI) technology for smart NextGen clinical MRI systems. Pursuant to the grant and subsequent to year end RS2D received an initial payment on March 29, 2021 of $629K.

On April 9, 2021, RS2D received $383K for their 2019 Credit impot Recherche.

TRANSACTIONS WITH RELATED PARTIES

Related parties include members of the Board of Directors and officers of the Company, and enterprises controlled by these individuals. The following fees and expenses were incurred in the normal course of business:

($000's)	December 31, 2020	December 31, 2019
Interest and finance fees on shareholder loans:		
Makino loan (F5) (note 9)	1	8
Essemtec loan (SMT)	-	15
	1	23

For the year ended December 31, 2020 $4K were paid in advisory services fees to directors (December 31, 2019, $79K).

Key management personnel compensation

Key management personnel are those persons having the authority and responsibility for planning, directing and controlling the business activities of the Company, including all of its directors, along with certain executives. Directors are remunerated through a cash directors fee and participation in the stock option and RSU plans. Executive compensation is comprised of base salary, bonus, benefits and participation in the stock option and RSU plans. The Company does not have a defined benefit or actuarial pension plan. Key management personnel participate in the stock option plan. Total remuneration to key management personnel were as follows:

($000's)	December 31, 2020	December 31, 2019
General & administration (salaries, w ages, fees, benefits)	478	386
Stock-based compensation	129	178
	607	564

OFF-BALANCE SHEET ARRANGMENTS

The Company does not have any off-balance sheet financing arrangements.

NON - GAAP TERMS

The Company reports on certain key financial performance measures that are used by management to evaluate the performance of Nanalysis. These key financial performance measures are not recognized financial terms ("Non-GAAP Terms") under Canadian generally accepted accounting principles (Canadian "GAAP"). For publicly accountable enterprises, such as Nanalysis, Canadian GAAP is governed by principles based on International Financial Reporting Standards ("IFRS") . Management believes these Non-GAAP Terms are useful supplemental measures.

Gross profit

Gross profit is defined as revenue less cost of products sold, cost of products sold includes direct cost of manufacturing, overhead and warranty expenses. The Company's method of calculating gross profit may differ from that of other companies and accordingly, may not be comparable to measures used by other companies.

Non-GAAP Term	Year ended December 31	
($000's)	2020	2019
Revenue	7,874	8,364
Deduct:		
Cost of products sold	(2,707)	(2,304)
Gross profit	5,167	6,060

Net cash(debt)
Net cash is defined as cash less loans and leases. The Company's method of calculating net cash may differ from that of other companies and accordingly, may not be comparable to measures used by other companies.

Non-GAAP Term	Year ended December 31	
($000's)	2020	2019
Cash	3,158	6,619
Deduct:		
Long-term debt/repayable contributions	(3,024)	(1,136)
Lease liabilities	(752)	(371)
Net cash(debt)	(618)	5,112

CRITICAL ACCOUNTING POLICIES AND ESTIMATES
The Company prepares its consolidated financial statements in accordance with IFRS. In preparing its financial statements, management is required to make various estimates and judgments in determining the reported amounts of assets and liabilities, revenues and expenses, as well as the disclosure of commitments and contingencies. Management bases its estimates and judgments on its own experience and various other assumptions believed to be reasonable at the time and under the circumstances in existence when the financial statements were prepared. Anticipating future events cannot be done with certainty; therefore, these estimates may change as new events occur, more experience is acquired or the Company's operating environment changes. More detailed information regarding the accounting estimates believed by management to require the most difficult, subjective or complex judgments and which are material to the Company's financial reporting results are discussed in the Company's Annual Financial Statements for the year ended December 31, 2020, Company's profile on SEDAR at www.sedar.com.

ADDITIONAL CORPORATE INFORMATION
The Company is a publicly-traded Corporation listed on the TSX Venture Exchange under the symbol "NSCI". Additional information relating to the Company, can be found on SEDAR at www.sedar.com.

FORWARD LOOKING STATEMENTS
This Management's Discussion and Analysis ("MD&A") contains certain forward looking statements and forward looking information (collectively referred to herein as "forward looking statements") within the meaning of applicable Canadian securities laws. All statements other than statements of present or historical fact are forward looking statements. Forward looking information is often, but not always, identified by the use of words such as "could", "should", "can", "anticipate", "expect", "believe", "will", "may", "projected", "sustain", "continues", "strategy", "potential", "projects", "grow", "take advantage", "estimate", "well positioned" or similar words suggesting future outcomes. In particular, this MD&A may contain forward looking statements relating to future opportunities, business strategies, development and production plans and competitive advantages.

The forward looking statements regarding the Company are based on certain key expectations and assumptions of the Company concerning anticipated financial performance, business prospects, strategies, regulatory developments, exchange rates, tax laws, the sufficiency of budgeted capital expenditures in carrying out planned activities, the availability and cost of labour and services and the ability to obtain financing on acceptable terms and future costs and expenses being based on historical costs and expenses, adjusted for inflation, all of which are subject to change based on market conditions and potential timing delays. Although management of the Company consider these assumptions to be reasonable based on information currently available to them, they may prove to be incorrect.

By their very nature, forward looking statements involve inherent risks and uncertainties (both general and specific) and risks that forward looking statements will not be achieved. Undue reliance should not be placed on forward looking statements, as a number of important factors could cause the actual results to differ materially from the beliefs, plans, objectives, expectations and anticipations, estimates and intentions expressed in the forward looking statements, including among other things: general economic and market factors, including business competition, changes in government regulations or in tax laws; component prices; technology development or operational activities; inability to scale manufacturing; changes in market demand; changes in international trade regulations, affecting the Company; timing and availability of external financing on acceptable terms; and lack of qualified, skilled labour or loss of key individuals; as well as those factors detailed from time to time in the Company's interim and annual financial statements and management's discussion and analysis of those statements. Readers are cautioned that the foregoing list is not exhaustive.

The forward looking statements contained herein are expressly qualified in their entirety by this cautionary statement. The forward looking statements included in this MD&A are made as of the date of this MD&A and the Company does not undertake and is not obligated to publicly update such forward looking statements to reflect new information, subsequent events or otherwise unless so required by applicable securities laws.