



MANAGEMENT'S DISCUSSION & ANALYSIS

Three Months Ended March 31, 2019
(Expressed in Canadian dollars)

Novra Technologies Inc.

Management's Discussion & Analysis

Three months ended March 31, 2019

The following Management's Discussion and Analysis ("MD&A") of Novra Technologies Inc. ("Novra") should be read in conjunction with the unaudited Condensed Consolidated Financial Statements for the three months ended March 31, 2019, and related notes included therein. These unaudited interim Condensed Consolidated Financial Statements have been prepared in accordance with International Accounting Standards ("IAS") 34, *Interim Financial Reporting*. They do not include all of the information required in annual financial statements in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"), and therefore these should be read in conjunction with Novra's annual 2018 Audited Financial Statements.

All information in this MD&A is presented in Canadian dollars, unless otherwise indicated. Tabular dollars are in thousands, except per share amounts. Amounts in tables may not reconcile due to rounding differences.

Throughout this MD&A, "we", "us", "our", "Novra", and "Company" refer to Novra Technologies Inc. and its subsidiaries.

This MD&A is dated as of May 30, 2019 and is current to this date. The MD&A and the unaudited interim Condensed Consolidated Financial Statements were approved and authorized for issuance by the Board of Directors on May 30, 2019.

Financial statements, MD&A and other information relating to Novra are available on SEDAR at www.sedar.com.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This MD&A contains "forward-looking statements" within the meaning of applicable Canadian securities laws, concerning but not limited to: our outlook, the expected cost savings from integrating Wegener operations with the Novra Group, proposed acquisition of Westport Research & Associates, anticipated developments in our operations in future periods, the adequacy of Novra's financial resources and other events and conditions that may occur in the future. Forward-looking statements are generally identifiable by words such as "expects", "anticipates", "believes", "intends", "estimates", "predicts", "potential", "targeted", "plans", "possible", and similar expressions, or statements that events, conditions or results "will", "may", "could" or "should" occur or be achieved. As such, forward-looking statements are not historical facts but reflect our current assumptions and expectations regarding future events. These are subject to a number of risks and uncertainties that could cause actual results or events to differ materially from current expectations and assumptions. Some of these risks and uncertainties are described herein under the "Risks and Uncertainties" section of this MD&A.

For the above reasons, readers are cautioned not to place undue reliance on forward-looking statements.

Novra Technologies Inc.

Management's Discussion & Analysis

Three months ended March 31, 2019

Table of Contents

BUSINESS OVERVIEW.....	3
OUTLOOK.....	4
RECENT DEVELOPMENTS.....	5
DISCUSSION OF OPERATIONS	6
Revenue and Gross Margin	6
Operating Expenses.....	7
Foreign Exchange Gain (Loss)	7
Finance Costs	8
Depreciation and Amortization	8
EBITDA and Adjusted EBITDA	8
OVERALL PERFORMANCE.....	8
LIQUIDITY.....	9
CAPITAL RESOURCES	11
OFF BALANCE SHEET ARRANGEMENTS.....	11
TRANSACTIONS WITH RELATED PARTIES.....	11
ACCOUNTING MATTERS.....	12
Critical Accounting Estimates	12
FINANCIAL INSTRUMENTS AND OTHER INSTRUMENTS.....	12
RISKS AND UNCERTAINTIES.....	12

Novra Technologies Inc.

Management's Discussion & Analysis

Three months ended March 31, 2019

BUSINESS OVERVIEW

Novra Technologies Inc. (headquartered in Winnipeg, Canada) is a public company on the TSX Venture Exchange ("TSX-V") and trades under the stock symbol "NVI" and is a Class 1 reporting issuer. We have been in the satellite data distribution business since 2000. In 2016, we significantly expanded our product portfolio and global footprint with the acquisition of International Datacasting Corporation ("IDC"), a long-time leader in the same sector (based in Ottawa, Canada). In 2017, Novra acquired a 51.6% controlling interest of Wegener Corporation ("Wegener") to further expand its footprint in digital media management and distribution technologies for applications including digital signage, radio and television. The companies joined together to form the Novra group of companies ("Novra Group") – see our group website at www.novragroup.com.

The three companies have a lot in common and enough differences to be very complementary. Although the historic markets for these companies are mostly adjacent and complementary, they also have a couple of overlaps. By bringing these three companies together, our goal is to consolidate the overlaps, expand the adjacencies and use our strong engineering skills to develop new innovating products for our existing clients and to also enter new emerging vertical markets.

Our competitive advantage is our people and their 30 years of knowledge and experience in developing innovating products along with the deep relationships that we have established with our clients for the past 30 years. These historic relationships with our customers, our extensive engineering experience and our business agility, are invaluable components in our drive for innovation as we develop new advanced products.

Today, the Novra Group is a global business with customers on every continent. We are a technology provider and we offer a comprehensive product portfolio including hardware, software, and services. In addition, our areas of expertise and added value include: encryption and cybersecurity, next-generation hybrid networks (satellite/terrestrial/cloud), and efficient bandwidth utilization.

Our core product lines are:

- *Video distribution:* products and systems for providing end-to-end solutions for traditional and non-traditional video networks. Our video products target the following key market niches:
 - Broadcast video networks of all sizes
 - Digital program insertion (for targeted advertising, regionalization, and blackout management)
 - Live and file-based video content distribution
 - Digital signage
- *Broadcast Radio:* we are a leading provider of end-to-end infrastructure solutions to broadcast radio networks small, medium, and large. We have a reputation for reliable, cost-effective delivery of high-quality audio via satellite, terrestrial, or hybrid networks. The radio product line includes uplink and receive site equipment as well as network management, encryption, and targeted regionalization/ad insertion options.
- *Data distribution:* our broadband multimedia distribution technology is ideally suited for networks requiring fast, ultra-reliable, secure delivery of data via satellite. In addition to providing the hardware infrastructure (transmit and receive), we offer an advanced content distribution network (CDN) software solution (Datacast XD) for ultra-reliable and secure file broadcasting.
- *Digital cinema:* we provide leading digital cinema networks with their core distribution infrastructure (uplink equipment, content management, and network management) and high-end appliances for cinemas as well as decoders for live events and alternative content (entertainment and sports) in 2D and 3D. Additionally, we offer a digital cinema distribution software solution for integration onto commercially available servers and third-party equipment.
- *Satellite and terrestrial broadband receivers:* we offer a line of cost-effective, reliable DVB and ATSC compliant receivers for the expanding broadband communications network market.

Novra Technologies Inc.

Management's Discussion & Analysis

Three months ended March 31, 2019

OUTLOOK

We are starting 2019 on a strong note as our sales, bookings and our sales funnel are healthy with new opportunities in every one of our priority vertical markets. In the first quarter of 2019 we saw strong sales from radio networks and on March 19th, 2019, we announced that our (Q4/Q1) radio orders were over \$4.0 Million from both existing clients and new clients. These orders came from North America, Latin America, Europe and Asia which shows strong geographical diversity.

With the acquisition of 51.6% controlling interest of Wegener Communications in December 2017, we are executing on our vision to bring great companies with complementary technologies together to capitalize on market opportunities by consolidating and refocusing engineering to provide world-class leading-edge products and services to our clients.

As a result of these acquisitions, Novra has significantly evolved into a strong, scalable global company in the growing multimedia broadband content distribution business. Our goal is to move from being an engineering-centric to client-centric company—our product development will be driven by identifying client requirements and real market trends. Our clients are looking for cost effective solutions with built-in flexibility to enable them to deliver their services with the lowest operational costs, not only today but over the life-span of our products. Only offering hardware and software is not adequate in this technological dynamic environment. We want to offer to our clients complete solutions and would like for them to consider Novra as their technology partner that they can depend on to help them solve their engineering challenges.

We take these challenges very seriously and all of us at the Novra Group of companies are committed and determined in achieving these very important goals for our clients and our shareholders.

Our high priority goals for 2019 are:

- Continue to drive costs efficiencies as we bring Wegener into the Novra group of companies. Some additional efficiencies are expected to take effect during the second half of 2019.
- Increase our revenues by improving our bookings and backlog levels throughout the Group. This will help to smooth out our quarterly revenues and will make our financial results more predictable.
- In the past year we have achieved operational efficiencies by merging our Marketing, Finance and Engineering divisions across the three companies, In 2019 we shift our integration focus to merging our manufacturing and customer support divisions and implementing a common financial system across the three companies.
- Continue to develop new and innovative products by taking the best features from our existing product lines to create flexible, modular and cost-effective solutions that will meet market demand and increase our market share. New products using this approach have already been announced and more are expected throughout 2019.
- Through our new modular upgradeable products, provide our clients with protection of their investment even if in the future their requirements change to meet new operational needs. This will give us a competitive advantage and, in many cases, shorten the technology selection process that clients currently go through.
- Manage, refocus and energize our global re-seller network to enable them to offer a wider range of products and solutions to their clients.
- Position Novra for additional acquisitions, over the next 18-24 months, of companies with complementary technologies that will increase our sales and profitability.

RECENT DEVELOPMENTS

The following highlights illustrate the scope of our recent product development, engineering and sales activities:

Our year-to-date bookings are healthy—building momentum for the rest of the year. New orders have come from all of our vertical markets and geographical regions. 20% are from new customers, which bodes well for future business.

We released four new Novra Group products at the NAB 2019 show. We submitted two of our products and both were nominated for the prestigious NAB Product of the Year award. One of these products—the iPump 762 Pro, targeting the digital signage and enterprise video markets, won the prestigious award for Hardware Infrastructure. This product family has been used in Digital signage projects in Latin America. We are currently producing a large order to ship in June 2019.

We expanded our suite of products for video applications including broadcast, OTT and IPTV networks. We integrated Broadpeak's nano CDN technology into the S400 Pro data receiver in early 2019 to enable OTT delivery to multiscreen environments.

In Q2, we have seen an unexpectedly high number of requests for our new S400 Pro satellite receiver for evaluation/pilot projects from existing and new clients as they are preparing to roll-out new satellite services.

We joined the SRT Alliance and are integrating the SRT (Secure Reliable Transport) technology for improved broadcast quality over internet into our products.

In the radio market, we also launched a next-generation audio receiver platform, MAP Pro Audio, as well as a high-performance audio encoder in partnership with Digigram in 2019.

In Q2, we also delivered, for evaluation our new radio receiver (MAP Pro Audio) to a US based radio operator and potential new client.

We received strong follow on orders from existing customers for our Digital Signage products including a new order from the Wellness Network in early 2019 with excellent potential for additional orders

We released our first joint IDC/Wegener product: The Edgecaster Pro for digital program insertion, combining the sophisticated SCTE-35 targeting and blocking capabilities of IDC's Laser with video decoding and graphics overlay features of Wegener's respected iPump line. We have recently received our first order from a prestigious broadcaster in Mexico. That order is expected to ship in Q2,

We won a competitive tender in 2018 Q4 with Radiotelevisión Española (RTVE) through our partner Aicox to provide 348 IRDs across the Americas in early 2019.

We experienced steady follow-on orders for ongoing government projects including orders for IP encapsulators, receivers, and encryption products

We received initial orders in 2018 for a new Digital Cinema network that is expected to expand significantly in second half of 2019. We were successful for this opportunity because we were able to demonstrate an innovative method for highspeed satellite file transfer by combining IDC and Novra technologies. This new service is for the Asian Pacific region.

Novra Technologies Inc.

Management's Discussion & Analysis

Three months ended March 31, 2019

DISCUSSION OF OPERATIONS

The following table sets selected information from our Consolidated Financial Statements, including a reconciliation of IFRS to non-IFRS measures, for the period indicated:

<i>(in thousands)</i>	Three Months Ended March 31,		
	2019	2018	% Chg
Revenue by type:			
Products	1,923	\$ 1,517	27%
Services	577	555	4%
Total revenue	2,500	2,072	21%
Gross profit	909	880	3%
<i>Gross margin</i>	36.4%	<i>42.5%</i>	
Operating expenses	1,604	1,699	-6%
Operating income (loss)	(695)	(819)	NM
Other income (expenses)	(149)	56	NM
Net income (loss) as reported under IFRS	(844)	\$ (763)	NM
<i>Adjustments:</i>			
Finance income	-	(1)	-100%
Finance costs	64	53	20%
Depreciation and amortization	393	242	62%
Tax expense (recovery)	-	-	NM
EBITDA - non-IFRS measure	(387)	(469)	NM
Loss (gain) on foreign exchange	86	(109)	NM
Share-based compensation	3	8	-62%
Adjusted EBITDA - non-IFRS measure	(299)	\$ (570)	NM

NM - Not meaningful

Revenue and Gross Margin

Q1 2019 vs. Q1 2018:

Total revenue increased 21% to \$2.5 million (2018 – \$2.0 million). Gross margin was 36.4% for the current quarter, a 6.1 percentage point decrease over the comparable quarter in 2018. The decrease in gross margin percentage was primarily driven by a couple of low margin integration projects consisting mainly of third-party products integrated with our technology.

For Q1 2019, our top 10 customers accounted 72% of total revenue with the first and second largest accounting for 30% and 24% respectively or \$1.3 million in aggregate. For the same period last year Novra's Top 10 customers accounted for 72% of total revenue with 33% and 11% respectively or \$1.5 million in aggregate. No other customer accounted for more than 10% of total revenue.

While our revenue may be concentrated on a few customers quarterly, with approximately 2,000 customers in over 100 countries, including over 200,000 installations since inception, we have a well-established customer base to provide diversification in our revenue base. The following table summarizes the geographic distribution of our revenues for the year.

Novra Technologies Inc.

Management's Discussion & Analysis

Three months ended March 31, 2019

	Three Months Ended March 31,			
	2019	% of Total	2018	% of Total
Canada	\$ 164	7%	\$ 251	12%
Americas ex-Canada	1,453	58%	1,414	68%
APAC	96	4%	233	11%
EMEA	787	31%	174	8%
	\$ 2,500	100%	\$ 2,072	100%

Operating Expenses

<i>(in thousands)</i>	Three Months Ended March 31,		
	2019	2018	% Chg
General and administrative ("G&A")	363	\$ 481	-25%
Sales and marketing ("S&M")	340	313	9%
Research and development, net ("R&D")	901	905	0%
Total operating expenses	1,604	\$ 1,699	-6%

Total OPEX for Q1 2019 has been fairly consistent to the comparable quarter in 2018. For financial reporting purposes, we allocate facility costs to OPEX (G&S, S&M, R&D) and cost of revenue.

General and administrative ("G&A") expenses consist primarily of compensation paid to the corporate, IT, and finance staff as well as professional fees and public company related costs.

Our Sales and Marketing ("S&M") costs include compensation, including sales commissions, paid to our sales team, as well as tradeshow, promotion and travel and entertainment costs.

Research and Development ("R&D") costs will continue to be a significant component of our total operating expenses as we continue to develop innovative products and solutions to remain competitive in our industry. R&D costs include primarily compensation paid to engineering personnel and prototype costs. Notably, expenses related to amortization of intangible assets from acquisitions of IDC and Wegener are also included in R&D costs. This amortization of about \$230 thousand per quarter (\$920 thousand for the year) distorts our R&D expenditures as a percentage of revenue and it has an impact on our net operating results. R&D product development costs are expensed as incurred; we do not capitalize development costs.

Foreign Exchange Gain (Loss)

Although we generate a significant portion of our revenue outside of Canada, denominated in USD and Euro currencies, we have determined Novra's functional currency to be Canadian dollars. Additionally, most sales in Canada are also denominated in USD currency. Further, the procurement for most of our raw materials is denominated in USD currency; however, our domestic operating costs are denominated in CAD currency. Accordingly, Novra's financial position and operating results are significantly exposed to foreign currency movements. We actively manage our foreign currency risk and may also enter speculative currency positions based on management's best judgement.

Additional earnings volatility arises from the translation of monetary assets and liabilities denominated in foreign currencies at the rate of exchange on each date of the Consolidate Financial Position; the impact of which is reported as a foreign exchange gain or loss.

In the current quarter, we realized a foreign exchange loss of \$86 thousand, compared to a gain of \$109 thousand in the comparable period in 2018.

At March 31, 2019, the foreign currency denominated assets and liabilities, subject to remeasurement, are as follows:

Novra Technologies Inc.

Management's Discussion & Analysis

Three months ended March 31, 2019

<i>(in thousands)</i>	USD		Euro	
Assets	\$	3,208	€	78
Liabilities		(638)		(14)
Net assets before hedging	\$	2,570	€	65
Currency derivative contracts		-		-
Net assets -unhedged	\$	2,570	€	65
Impact on Novra's earnings if 5% change in foreign exchange rates	\$	128	€	3

At March 31, 2019, if the Canadian dollar had weakened/strengthened by 5% against the U.S. dollar and Euro with all other variables held constant, the resulting change to Novra's consolidated net loss would have been \$176 thousand. The above excludes Wegener's assets and liabilities which are denominated in USD.

Finance Costs

Finance costs were \$64 thousand for Q1 2019, a 20% increase over last year's Q1 (2018 – \$53 thousand). The increase is a result of the allocation of interest expense from operating leases due to the adoption of IFRS 16. We also made payments to reduce balances on the Crocus loan and the \$US floating rate IMT promissory note. There were no bank borrowings on our RBC credit facilities in 2019.

Depreciation and Amortization

The significant increase in depreciation and amortization costs for the year 2019 and 2018 was due to the adoption of the new accounting standard – IFRS 16. Operating leases are now being depreciated over their respective lease term, which results in an additional \$135 thousand being included in depreciation and amortization cost.

EBITDA and Adjusted EBITDA

EBITDA and Adjusted EBITDA are non-IFRS measures. EBITDA is defined as earnings before income tax expense, net financing costs, depreciation and amortization. Adjusted EBITDA is defined as EBITDA adjusted for foreign exchange gain or loss, acquisition-related costs, gain or loss on Wegener options, share-based compensation, restructuring charges, material write-down of inventories, and any other material impairment charges.

Management believes that EBITDA and Adjusted EBITDA provide important financial measures of Novra's operating performance because they allow management, investors, and other stakeholders to evaluate and compare Novra's core operating results from period to period by removing the impact of its capital structure (interest expense), asset base (depreciation and amortization), and tax consequences. Because EBITDA and Adjusted EBITDA do not have any standardized meanings prescribed by IFRS, other companies may calculate these non-IFRS measures differently, and therefore our EBITDA and Adjusted EBITDA may not be comparable to similar titled measures of other companies. Accordingly, readers are cautioned to not place undue reliance on these financial measures and encouraged to read all IFRS accounting disclosures presented in the audited Consolidated Financial Statements.

Adjusted EBITDA for Q1 was \$(299) thousand, compared to an Adjusted EBITDA of \$(570) thousand for the same period in 2018. The increase in Adjusted EBITDA was primarily driven by the implementation of IFRS 16, with the resulting recording of lease-related costs as depreciation, and a significant foreign exchange loss in 2019 versus a gain in Q1 2018.

OVERALL PERFORMANCE

Q1 2019 vs. Q1 2018:

- **Total revenue of \$2.5 million, an increase 21%**
- **Adjusted EBITDA of \$(299) thousand, compared to Adjusted EBITDA of \$(570) thousand**
- Net loss was \$844 thousand, compared to a loss of \$763 thousand in Q1 2018
- Operating loss \$695 thousand, compared to a loss of \$819 thousand in Q1 2018
- Gross profit at \$909 thousand was 36.4% of total revenue, compared to \$880 thousand or 42.5%

Novra Technologies Inc.

Management's Discussion & Analysis

Three months ended March 31, 2019

- Operating expenses was \$1.6 million compared to \$1.7 million in Q1 2018
- Included in the Q1 results, and reducing net income, is approximately \$230 thousand of amortization expenses for intangibles assets associated with the purchases of IDC and 51% of Wegener. In addition, \$135 thousand of depreciation expense is included for operating leases due to the adoption of IFRS 16.

Although our Q1 revenue improved by 21%, our consolidate Net Income loss increased mainly due to an \$86 thousand foreign exchange loss versus a \$108 thousand gain for Q1 2018.

Our results also include amortization of \$251 thousand for the purchases of IDC and 51% of Wegener.

Our consolidated operating expenses were lower for this reporting period and we saw an improvement in our Operating Income and Adjusted EBITDA.

Although these results were expected, we not happy with them and we are determined to improve them. Based on our current bookings and backlog levels, we also expect a loss for Q2 but we believe the second half of 2019 will show a marked improvement because of the focused work we are doing on reaching new customers, expanding the networks of current customers, cutting costs, shipping customer orders already in our backlogs, and providing products needed in our market spaces.

SELECTED QUARTERLY FINANCIAL INFORMATION

(dollars in thousands, except per share data)

The following table sets out selected financial information for our current and eight most recently completed quarters.

	Mar 31 2019	Dec 31 2018	Sep 30 2018	Jun 30 2018	Mar 31 2018	Dec 31 2017	Sep 30 2017	Jun 30 2017	Mar 31 2017
Revenue	\$ 2,500	\$ 3,406	\$ 3,558	\$ 1,594	\$ 2,072	\$ 1,801	\$ 2,048	\$ 3,261	\$ 2,422
Gross profit	909	1,854	2,087	758	880	918	946	1,810	1,130
Operating expenses	1,604	1,603	1,527	1,582	1,699	1,010	815	1,074	953
Foreign exchange gain (loss)	(86)	188	(37)	90	109	10	(20)	(32)	5
Net income (loss) as reported under IFRS	(844)	535	467	(791)	(763)	(145)	43	639	242
Adjusted EBITDA income (loss)	(299)	647	862	(490)	(570)	41	244	860	274
Earnings (loss) per share - diluted	\$ (0.025)	\$ 0.016	\$ 0.012	\$ (0.024)	\$ (0.023)	\$ (0.004)	\$ 0.001	\$ 0.021	\$ 0.008
Weighted average shares outstanding	33,360	33,467	33,348	33,348	33,336	33,308	33,285	30,369	29,079

We occasionally receive large orders from customers and partners which can provide revenue visibility for future quarters. However, a large portion of Novra's quarterly revenues are generated from orders received in the quarter rather than from order backlog going into the quarter. As a result, Novra's revenue, profitability and cash flows are difficult to predict and may fluctuate significantly from quarter to quarter.

We expect continued significant volatility in revenue from quarter to quarter due to particular timing of orders from existing customers, continued economic instability in certain geographic regions and significant unpredictability in the length of sales cycles with new and existing customers in the sales pipeline. The result of limited order visibility is that revenue and, accordingly, profitability and cash flows, will be difficult to predict and will fluctuate.

LIQUIDITY

Quick Ratio

Our principal liquidity requirements are for working capital, capital expenditures and for pending acquisitions as previously announced. Management measures liquidity based on Novra's unrestricted cash and accounts receivable. The following table shows our total liquid assets at the following reporting dates.

	March 31, 2019	December 31, 2018
Cash	\$ 2,965	\$ 4,138
Accounts receivable	1,412	1,215
Total liquid assets	\$ 4,377	\$ 5,353
Quick ratio ⁽¹⁾	1.21:1	1.80:1

(1) Total liquid assets over total current liabilities, excluding amounts due to related parties and deferred revenue

Novra Technologies Inc.

Management's Discussion & Analysis

Three months ended March 31, 2019

The quick ratio as defined above is a non-IFRS financial measure. We believe this an important financial metric to investors and other stakeholders to assess Novra's ability to meet its third-party short-term obligations with its most liquid assets. The related parties have expressed no intent to call on their debt in the near term until such time Novra is in a stronger capital position. We also excluded deferred revenue in the quick ratio calculation as it does not represent a contractual financial obligation i.e. it is a liability that will reverse once revenue recognition has been met.

At March 31, 2019, Novra's quick ratio was 1.21:1 or \$1.21 of liquid assets available to cover each \$1.00 of third-party current liabilities, a decrease from 1.80:1 at December 31, 2018.

The following is a summary of cash flows by activities for Q1 2019 vs. 2018.

Operating activities

We had negative cash flows from operating activities of \$853 for Q1 2019, compared to positive cash flows from operating activities of 240 thousand for 2018. This was mostly due to the net change in non-cash working capital.

Investing activities

We had no cash flows driven by investing activities during Q1 2019 and 2018.

Financing activities

We have negative \$184 thousand net cash from financing activities in the current period, compared to positive \$124 thousand in the comparable prior period. In Q1 2019, we made repayments on our IMT promissory notes and included payments of \$159 thousand on lease liabilities, with the adoption of the new accounting standard.

As of the date of this MD&A we continue to have access to the RBC Credit Facilities. There are no amounts outstanding.

Working Capital Ratio

Novra's working capital ratio was as follows:

	March 31, 2019	December 31, 2018
Working Capital:		
Current assets	\$ 7,003	\$ 8,110
Current liabilities	6,358	5,691
Working capital	\$ 645	\$ 2,419
Working capital, excluding related party and deferred revenue balances	\$ 3,399	\$ 5,143
Working capital ratio⁽¹⁾	1.94:1	2.73:1

(1) Total current assets over total current liabilities, excluding amounts due to related parties and deferred revenue

Working capital decreased to \$645 thousand at March 31, 2019, from \$2.4 million at December 31, 2018.

"Working capital, excluding related party and deferred revenue balances" and "Working capital ratio" as defined above are both non-IFRS financial measures. Management believes these are useful, relevant financial measures to investors and other stakeholders in order to assess the available working capital to fund Novra's day-to-day operations.

Novra Technologies Inc.

Management's Discussion & Analysis

Three months ended March 31, 2019

Excluding related party and deferred revenue balances, Novra's working capital decreased to \$3.4 million at March 31, 2019, from \$5.1 million at December 31, 2018. Our working capital ratio (as defined above) remained healthy at 1.94:1 or \$1.94 per \$1.00 of current liabilities at March 31, 2019.

Contractual obligations and commitments

At March 31, 2018, Novra's contractual obligations and commitments were as follows:

Payment due:	Total	Within 1 year	1 to 3 years	3 to 5 years
Borrowings (Note 5)	\$ 2,664	\$ 154	\$ 153	\$ 2,357
Operating leases (Note 3)	2,832	865	1,029	938
Purchase commitments (Note 13)	143	68	75	-
Trade payables and other payables	255	255	-	-
Total third party contractual obligations	5,894	1,342	1,257	3,295
Promissory notes from related party (Note 5)	957	483	472	2
Advances from related parties (Note 5)	781	781	-	-
Total contractual obligations	\$ 7,632	\$ 2,606	\$ 1,729	\$ 3,297

See Consolidated Financial Statements notes for further details.

Based on the March 31, 2019 liquid assets (as defined above) and working capital, we have sufficient liquid resources to fund all third-party contractual obligations coming due within one year.

CAPITAL RESOURCES

Our key objectives and policies for managing capital are to maintain a strong capital base in order to:

- maintain investor, creditor and market confidence;
- advance Novra's corporate strategies to generate attractive risk-adjusted return over the long-term for our shareholders;
- sustain Novra's operations and growth through all cycles; and
- ensure compliance with the covenants of any applicable credit facility and other financing facilities.

At March 31, 2019, our total outstanding voting common shares were 33,372,312, excluding the 2,000,000 common shares held by our subsidiary, Wegener (December 31, 2018 - 33,372,312).

Our capital resources were as follows:

	March 31, 2019	December 31, 2018
Borrowings (drawn)	\$ 2,664	\$ 2,709
Promissory notes from related party	957	977
Shareholders' equity ⁽¹⁾	553	1,520
Total capital resources	\$ 4,175	\$ 5,206

The change in capital resources was primarily due to net losses for the current quarter.

Based on Novra's current liquidity, as discussed above, management believes Novra has sufficient capital resources to fund Novra's operations for the foreseeable future, including the contractual obligations and commitments as noted above.

OFF BALANCE SHEET ARRANGEMENTS

At March 31, 2019, we had no off-balance sheet arrangements.

TRANSACTIONS WITH RELATED PARTIES

Novra Technologies Inc.

Management's Discussion & Analysis

Three months ended March 31, 2019

In addition to key management personnel compensation, we have material unsecured promissory notes with IMT (IMT is a shareholder and our President & CEO has a controlling interest in IMT) as disclosed in the "Liquidity" and "Capital Resources" sections of this MD&A. Refer to Note 4 of the Consolidated Financial Statements for a complete disclosure of all related party transactions, including amounts due on demand.

ACCOUNTING MATTERS

Critical Accounting Estimates

The unaudited interim Condensed Consolidated Financial Statements include certain amounts that are inherently uncertain and judgmental in nature. As a result, management is required to make assumptions and best estimates in order to determine the reported values. We consider an accounting estimate to be critical if: (1) it requires that significant assumptions be made in order to deal with uncertainties; and (2) changes in the estimate could have a material impact on our results of operations, financial condition or liquidity.

We believe that the material items requiring such subjective and complex estimates are as follows:

- Revenue recognition
- Inventory obsolescence
- Impairment of non-financial assets

Refer to Note 3 of the 2018 Consolidated Financial Statements for further details.

We believe that the amounts included in these financial statements reflect management's best judgment. However, factors including, without limitation, those noted under "Risks and Uncertainties" below could cause actual events or results to differ materially from our underlying assumptions and estimates. Accordingly, this could lead to a material adverse impact on our results of operations, financial condition and/or liquidity.

New Accounting Standards

On January 1, 2019, we have adopted the following new accounting standard:

- IFRS 16 – Leases

The adoption of this new accounting standard did not impact operating performance or internal accounting processes and procedures. Refer to Note 3 of the unaudited interim Condensed Consolidated Financial Statements for further details on these new accounting standards.

FINANCIAL INSTRUMENTS AND OTHER INSTRUMENTS

There were no new financial instruments. Refer to Note 5 of the 2018 Consolidated Financial Statements for disclosure relating to Novra's financial instruments and financial risk management objectives and policies.

RISKS AND UNCERTAINTIES

Refer to our 2018 MD&A for a list of risks and uncertainties facing Novra. We are currently not aware of any new material risks and uncertainties.