novra
TECHNOLOGIES INC.

MANAGEMENT'S DISCUSSION & ANALYSIS

Periods ended September 30, 2023 and 2022

(Expressed in Canadian dollars)

The following Management's Discussion and Analysis ("MD&A") of Novra Technologies Inc.("Novra") should be read in conjunction with the Consolidated Financial Statements for the periods ended September 30, 2023 and 2022, and related notes included therein (the "Consolidated Financial Statements"). These Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards ("IFRS"). 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 November 29, 2023 and is current to this date. The MD&A and the Consolidated Financial Statements were approved and authorized for issuance by the Board of Directors on November 29, 2023.

Financial statements, MD&A and other information relating to Novra are available on SEDAR+ at www.sedarplus.ca.

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 remaining 48.4% of Wegener, 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 "expect", "anticipates", "believes", "intends", "estimates", "predicts", "potential", "promising", "targeted", "plans" "possible", "position for", "prepare for" 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.

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BUSINESS OVERVIEW

Novra Technologies Inc. (headquartered in Winnipeg, Canada) is a public company on the TSX Venture Exchange ("TSX-V"), which trades under the stock symbol NVI. Novra is also listed in the United States on the OTCQB Venture Exchange, under the symbol NVRVF. Novra owns International Datacasting Corporation ("IDC") based in Ottawa, Canada, as well as controlling interest in Wegener Corporation ("Wegener"), based in Atlanta GA. Both are long-time leaders in multimedia broadband distribution infrastructure. Together they make up the Novra group of companies ("Novra Group"). For more background see the website at www.novragroup.com.

Novra is a global business with customers on every continent. We provide technology for distribution of broadband data via satellite and IP networks with a specialization in broadcast media. The Novra Group companies offer a comprehensive portfolio of products, systems, and services. Products include hardware and software tailored for advanced applications in key vertical markets: video, radio, and data distribution, digital cinema and digital signage. Areas of expertise and added value include: encryption, next-generation hybrid networks (satellite/terrestrial/cloud), and efficient bandwidth utilization.

About our business

The media distribution landscape is going through major upheaval driven by a combination of market and technology factors. Important changes include:

- **Content is changing.** With the explosion of streaming media—video and audio—long form content, limited series, live vs on-demand, the demand for media is growing and evolving.

- **Revenue models are changing.** Advertising can be much more precisely targeted. New subscription models are emerging. Licensing and underwriting practices are changing. Content is being accessed in more granular models (e.g., through specific apps vs bouquets of live channels).

- **Distribution platforms and architectures are changing.** The legacy model of distribution of channel-based media as a broadcast via satellite-"point to multipoint"- is evolving into a bandwidth intensive hybrid satellite/internet model.

These changes are happening fast and networks are looking for infrastructure that can support these changes - infrastructure that is adaptable and upgradeable. This means a move away from hardware intensive platforms requiring "forklift upgrades" every few years, to software-centric appliances that are scalable, flexible, and cost-effective. We are focused on providing the technology and expertise to meet this paradigm shift.

Keeping up with the changes: designing for today and tomorrow

Our business strategy addresses the current needs of our customers and key markets while steering in the direction of new models and new opportunities.

- **Targeting the applications and geographical markets where satellite technology still thrives** including government applications (communications, weather, defense) in North America and around the world, international markets where geographical population distribution is wide and availability of terrestrial broadband is low (such as Latin America and Australia), as well as longtime customers with legacy networks that continue to evolve and grow.

- **Diversifying into hybrid and IP distribution where we have competitive advantages and see opportunity.** All of our products support satellite and IP distribution and are designed for maximum interoperability.

- **Addressing our customers' need for migration strategies**—we are "cloud-ready" with the hardware and software products networks need, as well as systems expertise. We partner with our customers to help them decide whether, when, and how to migrate their systems.

Smart products:

We are taking innovative initiatives to improve functionality, reduce costs, and open new markets for our products:

- We have been pioneers in cloud delivery for broadcasters. Our **MISTiQ** managed cloud solution for broadcasters is now in its third generation. It's a mature, proven platform that allows broadcasters (radio and/or video) to use the internet for backup/redundancy, to expand their reach beyond the satellite footprint, even to migrate completely to internet delivery.

  The internet is an inhospitable environment for broadcasting which requires low-latency and reliable timing. MISTiQ uses aggressive strategies for mitigating the challenges of this environment and provides extremely low-latency and high availability. MISTiQ 3 has been upgraded to a containerized microservices architecture for increased scalability and features with expanded monitoring tools—to give customers more visibility and control over their data.

- We also are integrating and consolidating various product lines and models into our **MAP** series. MAP stands for Modular Architecture Platform—the design philosophy is to make a resilient, reliable hardware platform and customize/adapt it to particular vertical markets. For example, MAP Pro Audio has professional balance audio outputs, MAP Pro Cinema has expanded on-board storage for very large files, MAP Pro Video has specialized video outputs. By using common elements, we reduce the time to market, inventory requirements, and are in a better position to manage ongoing supply chain challenges.

- We continue to lead the market in IP Encapsulation and encryption solutions, as well as lifecycle support for mission-critical networks.

Our business focus: We are leaders in an important market niche—mission-critical professional networks that require rapid, ultra-reliable content delivery, whether for a live on-air broadcast, urgent secure defence data, the latest Hollywood blockbuster, or encrypted block chain data. Our core product lines are applicable across a range of vertical markets. This allows us to focus on maintaining a diversified business base. Our target vertical markets are:

- *Video distribution:* products and systems for providing end-to-end solutions for traditional and non-traditional video networks. This is a key focus area for our innovation activities, including ongoing projects in augmented reality, remote collaboration, and emerging technologies. 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)
  - Delivery of live and file-based video content distribution
  - Digital signage
  - IPTV
  - Professional-quality streaming video

- *Broadcast Radio:* We are a leading global provider of turnkey infrastructure solutions for 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. We have long-established and respected product lines as well as innovative new products recently released for this market.

- *Data distribution:* Our broadband multimedia distribution technology is ideally suited for fast, ultra-reliable, secure delivery of data via satellite or private IP network. In addition to providing hardware infrastructure (transmit and receive), we offer an advanced content distribution network (CDN) software solution, Datacast XD, with sophisticated file broadcasting capabilities.

- *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. This product line enables our solutions to provide secure file delivery speeds that are unparalleled in the market.

- *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. These receivers provide standalone communication gateways to local networks or have been integrated into a wide range of purpose-built appliances.

Our competitive advantage is our people and their 30 years of knowledge and experience in developing innovative products along with the deep relationships that we have established with our international network of reseller partners and, of course, our clients. These close customer relationships give us important market insights that, combined with our extensive engineering experience, form the foundation for our continuing development of advanced products and flexible solutions.

OVERALL PERFORMANCE

Novra's financial performance improved significantly after a slow start to the year and returned to net income profitability for the third quarter. Although our nine-month revenue was down by $888 thousand, our net income loss was $372 thousand, a $464 thousand improvement over the $836 thousand loss in the same period of 2022. This improvement is largely a result of reduced operating expenses and higher gross margin on sales of our software and services.

Many of the transportation and component lead-time challenges of the previous few years, resulting from global geo-political and public health situations, have eased somewhat in 2023. Our targeted steps to mitigate these challenges have led to our current healthy product inventory levels, which are allowing us to ship many of our new orders from stock and continue to deliver on the significant backlog we brought into the year. Novra's substantial deferred revenue of more than $1.6 million as of September 30, 2023, also provides some positive visibility into future revenue.

We continue to see pent up demand in our markets. Infrastructure replacements will be necessary due to technology obsolescence, aging equipment, and new business requirements. However, this is countered by the economic uncertainty, higher interest rates and contracting availability of capital that are leading businesses to delay investments in their infrastructures. While we are confident that opportunities exist and we are taking the right steps to be ready when customers decide to buy, we cannot know when the pent-up demand will turn into orders. We are therefore continuing to aggressively manage expenses and will continue to take any necessary steps to adjust expenditures to address this uncertainty.

In adapting to these evolving market dynamics, management has, and will continue to, take targeted actions. One example is the rightsizing of our facilities' footprints. Through investments in technology and other operational efficiencies to enable us to work more productively in less space, we have significantly reduced our occupancy costs. While this focus on cost-saving through efficiencies is continuing, we also continue to invest in various innovation initiatives and in building customer relationships to address current customer needs and position Novra for future growth.

Novra's cash position at the end of the period was strong, with bank deposits of over $1.2 million, $1.4 million in cashable guaranteed investment certificates (GICs), and a bank credit facility of $845 thousand providing a large pool of liquid funds.

The financial highlights for Q3 and the nine-month period shown below are derived from our Consolidated Financial Statements and include consolidation of Novra's subsidiaries; International Datacasting Corporation and Wegener Corporation (51.6% controlling interest).

Q3 2023 vs. Q3 2022:

- Revenue was $1.2 million in Q3 2023, compared to $2.1 million in Q3 2022, a decrease of $900 thousand. While total revenue decreased, service revenue for the quarter increased by $87 thousand compared to the same period last year.
- In Q3 2023, gross profit was $913 thousand, representing 73.6% of total revenue, compared to $999 thousand, which was 46.7%. The unusually high gross profit percentage in Q3 2023 was due to the specific product service mix and timing of some expenses.
- Operating expenses were $802 thousand in Q3 2023, compared to $1.0 million in Q3 2022, a decrease of 20% despite significant inflationary pressures.
- Net Income was $102 thousand, compared to $15 thousand in Q3 2022. This higher net income was driven by lower operating expenses and higher gross margin.
- Adjusted EBITDA* was $253 thousand, compared to Adjusted EBITDA* of $318 thousand. In 2023 Adjusted EBITDA was less effected by amortization, because of as of December 31, 2022, acquisition-related intangible assets were fully amortized.

First nine months of 2023 vs.2022:

- Revenue was $4.5 million in 2023, compared to $5.4 million in Q3 2022, a decrease of $888 thousand.
- In 2023, gross profit was $2.5 million, representing 55.2% of total revenue, compared to $2.5 million, which was 46.5%. This was an improvement of 8.7%.
- Operating expenses were $2.9 million in 2023, compared to $3.3 million in 2022, a decrease of $462 thousand. This was significantly influenced by reductions in facility occupancy costs and certain compensation costs.
- Net Income loss was $372 thousand, compared to loss of $836 thousand in 2022. This improvement was driven by both higher gross margin and lower operating expenses.
- Adjusted EBITDA* was $13 thousand, compared to Adjusted EBITDA* of $188 thousand.

*Adjusted EBITDA is a non-IFRS financial measure. Adjusted EBITDA provides an important financial measure of Novra's operating performance, allowing comparison of core operating results from period to period. Refer to the "EBITDA and Adjusted EBITDA" section below for details regarding calculation of this non-IFRS measure.

Our ongoing drive to realize synergies and efficiencies across the group continues to result in reductions in on-going consolidated operating expenses which will be reflected in the rest of 2023 and beyond. We will continue to actively control and adjust operating expenses in response to company performance and current volatile market conditions.

Results and Outlook

The effects of economic uncertainty and armed conflicts continue to generate global geopolitical turmoil. While the negative effect on supply chains has abated in the last several months, distributor inventories remain tight, price increases are continuing and lead-times on certain electronic components extend to many months. In addition, higher interest rates and the threat of a potential recession are causing companies to delay large capital purchases. All of these continue to put downward pressure on revenue and gross profit. Novra's adaptive strategy to deal with supply-side challenges focuses on strategic inventory purchases, including advance purchasing of certain key components, and nurturing additional procurement channels, to ensure we are positioned well to respond to customer needs when they make the decision to purchase. Our inventories and builds in progress remain at healthy levels.

Our clients continue to navigate and adapt through these challenging circumstances to ensure operational reliability of their networks. We play a major part in helping them to achieve their goals by providing expert support services and powerful new products, which enhance their networks and enable more reliable service to their customers. Their continued confidence in choosing our products and services is reflected in our recent bookings and our identified sales opportunities. These demonstrate the importance our customers, even in times of global uncertainty, place on investment in the critical infrastructure components that Novra provides. We continue to pride ourselves on being a partner to our customers, there to support them in trying times as well as in times of exciting growth.

Our targeted sales efforts and our client-centric R&D activities have resulted in releases of new products which are continuing to be selected for new project rollouts, and we are continuing to receive more of those orders. In addition, we are investing in development of new technologies for use in future products, as demonstrated by our recently-granted US patent related to image processing for remote collaboration. We continue to be flexible in our product development, with an eye on technological trends and new communications standards, to ensure our products remain relevant throughout their life cycle and provide a valued investment to our clients.

An important component of our R&D strategy over the last three years has been the continued development of the MISTiQ platform for cloud-based distribution of content. We are also expanding our software products—including Datacast XD content management and distribution—into the Software as a Service (SaaS) model. This subscription model is increasingly popular with customers who don't have to invest in capital equipment or software upfront, and it's part of our approach to our ongoing strategic goal to generate a more consistent and predictable revenue base. In a project-based business like Novra's this offers the advantage of smoothing out inconsistent revenues. The work we've done and our substantial R&D investment over the past several years is paying off as we book more and more service business, including the recent selection by two major Canadian broadcasters of MISTiQ for their cloud-based content distribution.

Highlights of 2023 so far

This year we see many ongoing customers taking small steps to refresh and/or expand their networks, although at a cautious pace influenced by their challenging market conditions. Many are looking for new features in our products, which informs our technology enhancements going forward. This includes shifting to IP and hybrid satellite networks.

Since our last update:

- We received a new order for video receivers for a first-time customer, as well as ongoing network refresh and expansion orders for several established radio networks.
- Our customer support contract renewal business continues to be strong as networks maintain existing infrastructure longer.
- We have seen an increase in project opportunities and are partnering with service providers in some cases to chase them.
- There is an uptick in our government business. We are seeing accelerating demand for hardware and software products supporting deployed networks as well as preparing for technology refreshes to address emerging new requirements.

Also in 2023:

- We've had brisk repeat orders from existing government and commercial customers, including religious broadcasters – a robust and growing market segment.
- New patent: we were awarded a US patent for new technology that harnesses our experience in image processing to tackle the challenge of remote collaboration. We are in the process of refining the design for manufacture and exploring applications for this new technology.
- We upgraded the existing network of an international religious network based in Europe and Latin America. We were also pleased that our customer Am-BOS, the US-based distribution platform for Christian radio, successfully passed testing of next generation receivers based on IDC's MAP hardware platform. The Am-BOS team developed their own customized software for this innovative, customer-specific solution.
- We received a sizeable order to upgrade encryption technology for major US government broadcast service. We are the ongoing provider for this long-term program supplying decryption integrated into our satellite receivers as well as desktop client licenses. We are in the process of releasing a next-generation satellite receiver for this program in order to support ongoing lifecycle refresh requirements. This program also drives multiple business opportunities for software, receiver hardware appliances, IP Encapsulators, and ongoing support.
- We received a substantial order for S300 satellite receivers customized for US government applications from a long-time contractor customer.
- We received an order from Eastern European national radio broadcast network for an additional uplink to mitigate risk to their redundant uplinks caused by the current war in Ukraine.
- We received a follow-on order from Grupo Imagen, a major television network in Mexico, to expand its encryption infrastructure to support broadcast of Major League Baseball.
- We received a follow-on order from a digital signage/enterprise video network in the health care sector that is adding new channels based on our next-generation Signcaster Pro.
- Orders for support contract renewals and equipment to maintain and grow existing networks—across all vertical markets and sectors including government and commercial clients—are strong as we support our customers in maintaining long-term sustainable networks.

We continue to push to keep our technology fresh and work with our customers to meet their evolving and emerging needs. We believe repeat customers like these reflect the quality of the solutions we've provided to them in the past, the value of the on-going customer support that we deliver, and an endorsement of the technical advancements we've made in newer-generation products.

We continue to integrate and improve our product lines—adding new features and new capabilities—to address increasing opportunities to grow market share in key vertical markets. We also continue to push forward on our corporate vision to bring together great companies with complementary technologies to capitalize on both existing and new market opportunities. Our new products have integrated features and a consistent "look and feel", communicating to the market (including long-time customers) that we are a strong, unified company. We have successfully consolidated, integrated, and refocused our engineering efforts to provide world-class leading-edge products and services to our clients.

Through this process Novra has evolved significantly into a strong, scalable, global company oriented to the growing multimedia broadband content distribution business. We are focused on meeting the needs of our clients, who are looking for flexible, cost-effective solutions. Our product development is centred on listening and responding to identified client requirements as well as anticipating next-generation innovations. More and more, our hardware is becoming a platform for increasingly powerful and sophisticated software—bringing agility, forward compatibility, and longevity to the lifespan of our products.

DISCUSSION OF OPERATIONS

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

(In Thousands)	Three Months Ended September 30,			Period ended September 30,		
	2023	2022	% Chg	**2023**	2022	% Chg
Revenue by type:						
Products	**$ 821**	$ 1,809	-55%	**$ 2,140**	$ 4,267	-50%
Services	**419**	332	26%	**2,379**	1,141	109%
Total revenue	**1,241**	2,141	-42%	**4,519**	5,408	-16%
Gross profit	**913**	999	-9%	**2,495**	2,517	-1%
Gross margin	***73.6%***	*46.7%*		***55.2%***	*46.5%*	
Operating expenses	**802**	1,008	-20%	**2,858**	3,319	-14%
Operating income (loss)	**111**	(9)	NM	**(362)**	(802)	-55%
Other income (expenses)	**(9)**	23	NM	**(10)**	(34)	-71%
Net income (loss) as reported under IFRS	**$ 102**	$ 14	632%	**$ (372)**	$ (836)	-55%
Adjustments:						
Finance costs	**50**	5	900%	**155**	123	26%
Depreciation and amortization	**135**	328	-59%	**336**	981	-66%
EBITDA - non-IFRS measure	**287**	347	-17%	**118**	268	-56%
Loss (gain) on foreign exchange	**(34)**	(29)	17%	**(105)**	(80)	31%
Share-based compensation	**0**	0	NM	**0**	0	NM
Adjusted EBITDA - non-IFRS measure	**$ 253**	$ 318	-20%	**$ 13**	$ 188	-93%

NM – Not meaningful

*EBITDA and Adjusted EBITDA are non-IFRS financial measures. EBITDA and Adjusted EBITDA provide an important financial measure of Novra's operating performance, allowing comparison of core operating results from period to period. Refer to the "EBITDA and Adjusted EBITDA" section below for details regarding calculation of this non-IFRS measure.

Revenue and Gross Margin

Total revenue for Q3 was $1.2 million (2022 - $2.1 million). Gross margin was 73.6%, 26.9% higher than in Q3 of 2022. The increase in gross margin was primarily a result of differences in product/service mix and timing of certain expenses. For the 9-month period, revenue was 16% lower than 2022, but gross profit was only 1% lower, due to improved gross margin of 55.2% in 2023 compared to 46.5% in the same period in 2022.

For the nine months ended September 30, 2023, our top 10 customers accounted 60.2% of total revenue with the largest accounting for 19% and 11% respectively or $1.3million in aggregate. For the same period last year Novra's Top 10 customers accounted for 74.0% of total revenue, with the largest accounting for 43% or $2.3 million. No other customer accounted for more than 10% of total revenue. The Company continually monitors its revenue concentration risk and seeks to diversify its customer base.

While our revenue may be concentrated with 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 period.

	Three Months Ended September 30,		Nine Months Ended September 30,	
Geographic Market	**2023**	2022	**2023**	2022
Americas ex-Canada	**$ 1,060**	$ 1,720	**$ 3,701**	$ 4,262
Canada	**63**	111	**167**	5
EMEA	**19**	34	**268**	1,046
APAC	**120**	276	**383**	95
	$ 1,262	$ 2,140	**$ 4,519**	$ 5,408

Operating Expenses

(In thousands)	Three Months Ended September 30,			Period Ended September 30,		
	2023	2022	% Chg	**2023**	2022	% Chg
General and administrative ("G&A")	**379**	202	88%	**1,065**	762	40%
Sales and marketing ("S&M")	**189**	260	-27%	**659**	734	-10%
Research and development ("R&D")	**234**	547	-57%	**1,134**	1823	-38%
Total operating expenses	**802**	1,009	-21%	**2,858**	3,319	-14%

Total OPEX was lower both during the quarter (21% lower) and during the first 9 months of 2023 (14% lower) compared to the same periods in 2022. For financial reporting purposes, we allocate facility-related 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, along with certain general facilities-related costs. These expense lines increased for both the quarter and the first nine months of 2023. This was affected by a change in accounting for certain credits associated with intercompany transactions to more appropriately categorize them to other cost lines beginning in Q2. On-going overall operating cost reductions were also somewhat offset this period by the higher G&A expenses that resulted, in part, from timing of accounting services expenses related to previous tax filings and moving all companies to a common financial tracking system. We also had one-time costs related to moving to new facilities, which will significantly reduce our occupancy costs going forward.

Our Sales and Marketing ("S&M") costs consist of compensation paid to our sales team, as well as tradeshow, promotion, and travel &entertainment costs. We reduced our marketing expense by 10%

compared to the same period in 2022. The decrease was driven by a reduction in contract sales services costs and overall compensation expense.

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 acquisition of controlling interest in Wegener were also included in R&D costs in 2022. As of December 31, 2022, the acquisition-related intangible assets were fully amortized. This change is a significant contributor to the decrease in R&D expenses reported in 2023.

Beginning in 2022, certain new product development costs have been capitalized to more appropriately present our technology assets and R&D expenses. At the same time, amortization of these development assets over their useful lives is included in current expenses. Novra will continue to invest strategically in product development to position the company for future success.

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, many 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 Consolidated Financial Position; the impact of which is reported as a foreign exchange gain or loss.

For the first nine months of 2023 Novra had a foreign exchange gain of $105 thousand, compared to a gain of $80 thousand in 2022.

At September 30, 2023, the foreign currency denominated assets and liabilities, subject to remeasurement, are as follows:

(in thousands)	**USD**	**Euro**
Assets	1,089	9
Liabilities	(617)	-
Net assets before hedging	472	9
Currency derivative contracts	-	-
Net assets - unhedged	472	9
Impact on Novra's earnings if 5% change in foreign exchange rates	24	0

If on September 30, 2023 the Canadian dollar had weakened or strengthened by 5% against the U.S. dollar and Euro, with all other variables held constant, Novra's consolidated net income would have been impacted by $24 thousand. Please note that this calculation excludes Wegener's assets and liabilities, which are denominated in USD.

Other Income and Finance Costs

The Company did not qualify for the Canada Recovery Hiring Program (CRHP) for the 9-months ended September 2023 (2022 - $9 thousand). The CRHP is a federal government program created to provide financial support to businesses affected by COVID-19. In 2023 the Company recorded $41 thousand to finance income for interest on GICs.

Finance costs were $155 thousand for the first nine months of 2023, an increase from last year (2022 – $123 thousand). There were no bank borrowings on our RBC credit facilities in 2022 or 2023.

Depreciation and Amortization

Depreciation and amortization costs decreased to $336 thousand for the 9 months ended September 30, 2023 (2022 - $652 thousand). This includes intangible asset amortization of $185 thousand (2022 - $362 thousand) and $146 thousand in amortization of right-of-use assets (2022 - $287 thousand), as well as minimal capital asset amortization.

Tax Expense

Due to the net operating loss in the reporting period, there was no current tax provision to recognize.

Despite the significant non-capital loss carry forwards and available investment tax credits (see Note 14 of the audited Consolidated Financial Statements) to shelter future taxable income from income taxes, we have not recognized deferred tax assets at either September 30, 2023 or 2022 because management concluded it was not probable to realize this benefit in the foreseeable future. In making this determination, management considered the uncertainties in projecting future taxable income, the uncertainties related to the technology industry and competitive environment in which we operate, and the lack of available income tax planning strategies.

EBITDA and Adjusted EBITDA

EBITDA and Adjusted EBITDA are non-IFRS measures. EBITDA is defined as earnings before income tax expense, financing costs (interest), depreciation and amortization. Adjusted EBITDA is defined as EBITDA adjusted for foreign exchange gain or loss, any acquisition-related costs, share-based compensation, any restructuring charges, any 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 was $13 thousand for the 9 months ended September 30, 2023 compared to $188 thousand for the same period in 2022.

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 prior quarters.

(In thousands of dollars, except with respect to earnings (loss) per share	**Sep 30, 2023**	June 30, 2023	Mar 31, 2023	Dec 31, 2022	**Sep 30, 2022**	Jun 30, 2022	Mar 31, 2022	Dec 31, 2021	**Sep 30, 2021**
Revenue	**$ 1,241**	$ 2,192	$ 1,087	$ 2,195	**$ 2,141**	$ 2,338	$ 929	$ 1,509	**$ 891**
Gross profit	**913**	887	696	1,618	**999**	1,170	348	569	**193**
Operating expenses	**802**	1,005	1,051	1,234	**1,008**	1,228	1,082	279	**1,185**
Foreign exchange gain (loss)	**34**	(14)	85	18	**29**	8	43	(52)	**17**
Net income (loss) attributable to Novra	**354**	(52)	(324)	200	**(234)**	(230)	(643)	264	**(710)**
Adjusted EBITDA Income (loss)	**253**	85	(70)	653	**362**	274	(405)	594	**(380)**
Earnings (loss) per share - diluted	**$ 0.011**	$ (0.002)	$ (0.010)	$ 0.006	**$ (0.007)**	$ (0.007)	$ (0.019)	$ 0.008	**$ (0.021)**
Weighted average shares outstanding	**33,420**	33,420	33,420	33,420	**33,420**	33,420	33,396	33,396	**33,396**

We occasionally receive large orders from customers and partners that can provide revenue visibility for future quarters. However, a large portion of Novra's quarterly revenues are generated from orders received during 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 continue to expect significant volatility in revenue from quarter to quarter due to particular timing of orders from existing customers, continued economic and supply chain instability 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. We also expect on-going global geopolitical disruptions, higher interest rates and economic challenges to continue to impact markets and economies and therefore our customers and our business (refer to the Risks and Uncertainties section below).

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, certain cashable guaranteed investment certificates (GICs) and accounts receivable. The following table shows our total liquid assets at the following reporting dates.

	September 30, 2023	December 31, 2022
Cash	**$ 1,129**	$ 1,966
Guaranteed investment certificates	**1,403**	1,354
Accounts receivable	**863**	698
Total liquid assets	**$ 3,394**	$ 4,018
Quick ratio (1)	**1.17:1**	1.21:1

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

Guaranteed investment certificates have been included in liquid assets due to their ability to be cashed in if necessary; although an interest penalty would be incurred if this is done.

The quick ratio as defined above is a non-IFRS financial measure. We believe this is 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 that 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 September 30, 2023, Novra's quick ratio was 1.17:1 or $1.17 of liquid assets available to cover each $1.00 of third-party current liabilities, a slight decrease from 1.21:1 at December 31, 2022.

The following is a summary of cash flows by activities for first 9 months of 2023 vs. 2022. Overall, cash decreased by $837 thousand during the nine months ended September 30, 2023, to $1.1 million. Combined cash plus GICs at September 30, 2023 totalled over $2.5 million.

Operating activities

We had negative cash flows of $87 thousand from operating activities during the nine months ended September 30, 2023, compared to negative cash flows from operating activities of $185 thousand for the same period in 2022.

Investing activities

Cash flows from investing activities resulted in $471 thousand reduction in cash (2022 - $178 thousand reduction). The primary uses of this cash were costs of development assets.

Financing activities

We had negative $306 thousand net cash flow from financing activities during the nine months ended September 30, 2023, compared to negative net cash from financing activities of $299 thousand in the comparable prior period. In the current period we made repayments on our WEDC and Chymiak loans and made lease payments of $188 thousand toward our lease liabilities (2022 - $469 thousand).

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:

	September 30, 2023	December 31, 2022
Working Capital:		
Current assets	**$ 5,490**	$ 6,202
Current liabilities	**5,893**	5,697
Working Capital:	**$ (403)**	$ 505
Working capital, excluding related party and deferred revenue balances	**$ 2,581**	$ 2,891
Working capital ratio(1)	**1.89:1**	1.87:1
(1) Total current assets over total current liabilities, excluding amounts due to related parties and deferred revenue		

"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.

Working capital decrease by $908 thousand compared to December 31, 2022. This was largely as the result of a reduction in cash on hand. Novra's working capital excluding related party and deferred revenue balances, which we believe is an important financial metric to assess Novra's ability to meet its third-party short-term obligations, was $2.6 million, compared to $2.9 million at the previous year end. Our working capital ratio (as defined above) was 1.89:1 or $1.89 of current assets per $1.00 of current liabilities, excluding amounts due to related parties and deferred revenue at September 30, 2023, a slight improvement from December 31, 2022.

Contractual obligations and commitments

At September 30, 2023, Novra's contractual obligations and commitments were as follows:

Payment due:	Total	Within 1 year	1 to 5 years	5 to 10 years	10+ years
Borrowings (Note 6)	$ 2,507	$ 177	$ 32	$ 2,135	164
Operating leases (Note 11)	1,784	257	1,245	282	-
Purchase commitments (Note 11)	-	-	-	-	-
Trade payables and other payables	1,475	1,475	-	-	-
Total third party contractual obligations	5,766	1,909	1,277	2,417	164
Promissory notes from related party (Note 5)	1,254	-	1,254	-	-
Advances from related parties (Note 5)	1,726	1,726	-	-	-
Total contractual obligations	$ 8,746	$ 3,635	$ 2,531	$ 2,417	$ 164

Refer to the notes to the Consolidated Financial Statements for further details.

Based on the September 30, 2023 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 September 30, 2023 the Company had cash and cash equivalents of $1.1 million, cashable GICs of $1.4 million and access to an undrawn revolving facility of $845 thousand (the RBC Credit Facilities as described in Note 6 of the Consolidated Financial Statements), subject to the terms and conditions of the credit facilities. At the date of this MD&A we continue to have access to these facilities and no amounts are outstanding.

At September 30, 2023, Novra's total outstanding voting common shares were 33,420,293 excluding the 2,000,000 common shares held by our subsidiary, Wegener (December 31, 2022 - 33,420,293). Our debt and equity positions were as follows:

	September 30, 2023	December 31, 2022
Borrowings (drawn)	$ 2,507	$ 2,615
Promissory notes from related party	1,241	1,200
Shareholders' equity	(3,196)	(2,814)
Total capital resources	$ 552	$ 1,001

The change in capital resources was primarily due to repayments on borrowings and a net income loss for the period.

Management believes the Company's current cash, GICs, access to the undrawn portion of debt facilities and its access to additional financing in the form of debt or equity will be sufficient to meet its working capital and capital expenditure requirements for the foreseeable future, including its contractual obligations and the commitments noted above.

OFF BALANCE SHEET ARRANGEMENTS

At September 30, 2023, we had no off-balance sheet arrangements.

TRANSACTIONS WITH RELATED PARTIES

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 5 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 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
- Business combinations
- Impairment of non-financial assets

Refer to Note 3 of the audited Consolidated Financial Statements for the years ended December 31, 2022 and 2021 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.

FINANCIAL INSTRUMENTS AND OTHER INSTRUMENTS

There were no significant changes to the types of financial instruments held during the 9 months ended September 30, 2023. For further details refer to Note 8 of the audited Consolidated Financial Statements for the years ended December 31, 2022 and 2021, with additional information on Borrowings in Note 11.

RISKS AND UNCERTAINTIES

Refer to our December 31, 2022 MD&A for a list of risks and uncertainties facing Novra. We are currently not aware of any new material risks and uncertainties.