



MINERVA
INTELLIGENCE

Minerva Intelligence Inc.

Management Discussion and Analysis
of
Financial Position and Results of Operations
for the Three-month period ended March 31, 2020

 This report is dated May 15, 2020.
(The "Report Date")

Introduction

The following information should be read in conjunction with the unaudited condensed consolidated interim financial statements of Minerva Intelligence Inc. (the “Company”) for the three-month period ended March 31, 2020, as well as the audited financial statements of the Company for the year ended December 31, 2019.

The financial statements are prepared in accordance with International Financial Reporting Standards (“IFRS”).

Note 3 to the audited financial statements of the Company at December 31, 2019 describes the Company’s significant accounting policies, as well as new accounting pronouncements not yet effective. During the three-month period ended March 31, 2020, the Company’s critical accounting estimates and significant accounting policies have remained substantially unchanged.

All amounts presented in this document are stated in Canadian dollars, except where otherwise noted.

Forward Looking Statements

This Management’s Discussion and Analysis (“MD&A”) is intended to supplement and complement the unaudited condensed consolidated interim financial statements for the three-month period ended March 31, 2020 as well as the audited financial statements of the Company as of December 31, 2019 and notes thereto (the “Financial Statements”). Readers are encouraged to review these Financial Statements in conjunction with a review of this MD&A. Certain notes to the Financial Statements are specifically referred to herein, and such notes are incorporated by reference herein. Forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those implied by the forward-looking statements. These forward-looking statements are based on, but not limited to, material assumptions including: Company performance; the ability of the Company to successfully execute on its growth and new business strategies, including attracting new clients; the demand for its products continuing to increase; stable currency valuations; a sufficiently stable and healthy global economic environment; and other expectations, intentions and plans contained in this MD&A that are not historical fact. When used in this MD&A, the words “plan,” “expect,” “believe,” and similar expressions generally identify forward-looking statements. These statements reflect current expectations. They are subject to a number of risks and uncertainties, including, but not limited to, changes in technology and general market conditions. In light of the many risks and uncertainties, readers should understand that the Company cannot offer assurance that the forward-looking statements contained in this analysis will be realized. **Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date the statements were made, and readers are advised to consider such forward-looking statements in light of the risks as set forth below.**

Corporate Overview and Description of the Business

Minerva Intelligence Inc. (formerly Two Owls Ventures Corp.) (the “Company” or “Two Owls”) was incorporated on August 16, 2017 pursuant to the *Business Corporations Act* of British Columbia and was classified as a Capital Pool Company as defined in the TSX Venture Exchange (“TSX-V”) Policy 2.4. On March 14, 2018, the Company completed its Initial Public Offering (“IPO”) and on March 26, 2018, the Company’s shares commenced trading on the TSX-V.

On February 22, 2019, the Company incorporated a wholly owned subsidiary, 1198574 B.C. Ltd., under the *Business Corporations Act* (British Columbia). This subsidiary was incorporated solely for the purpose of completing the Qualifying Transaction (“QT”) discussed below.

Minerva Intelligence (Canada) Ltd. (formerly Minerva Intelligence Inc.) (“Minerva Canada”) was incorporated on May 17, 2017 pursuant to the Business Corporations Act of Ontario. On April 23, 2019, Minerva Canada continued its jurisdiction of incorporation from Ontario to British Columbia, to become subject to the B.C. *Business Corporations Act* (“BCBCA”).

On September 24, 2019, the Company established a German subsidiary company, Minerva Intelligence GmbH.

The head office of the Company is located at Suite 301, 850 West Hastings Street, Vancouver, British Columbia V6C 1E1. The registered office of the Company is located at 2900 - 595 Burrard Street, Vancouver, B.C. V7X 1J5.

Acquisition of Minerva Intelligence (Canada) Ltd.

On May 23, 2019 the Company closed its arm’s length Qualifying Transaction (“QT”), by acquiring all of the issued and outstanding shares of Minerva Intelligence (Canada) Ltd. from the former holders thereof, in exchange for shares of the Company. The reader is referred to the December 31, 2019 audited financial statements for a full discussion of the transaction.

As a result of the QT, the former shareholders of Minerva Canada own in excess of 50% of the outstanding shares of the amalgamated entity. For accounting purposes Minerva Canada is considered to be the accounting acquirer and therefore, the corporate merger has been accounted for as a reverse takeover. For financial reporting purposes, the Company is considered a continuation of Minerva Canada, the legal subsidiary, except with regard to authorized and issued share capital which is that of the Company, the legal parent. Consequently, certain comparative amounts in this document and the financial statements are those of Minerva Canada only.

Potential impact of the Pandemic on Corporate Operations and Activities

On March 11, 2020, the World Health Organization categorized COVID-19 as a pandemic. The potential economic effects within the entity’s environment and in the global markets, possible disruption in supply chains, and measures being introduced at various levels of government to curtail the spread of the virus (such as travel restrictions, closures of non-essential municipal and private operations, imposition of quarantines and social distancing) could have a material impact on the entity’s operations. The full extent of the impact of this outbreak and related containment measures on the entity’s operations cannot be reliably estimated, however the Company has experienced or implemented a number of specific items.

At the time of the announcement, the Company was actively engaged in marketing its products at various trade shows, and with following up on leads generated at those events. The Company had received favourable results which had generated a number of leads, expressions of interest and orders. However, as a result of uncertainty, many customers have advised that they are reducing costs, not pursuing projects or deferring any discussions or expenditures to a future date.

The Company has switched to videoconferencing as a means of reaching out to clients, however the overall effectiveness of this approach compared to traditional marketing is not yet clear. Certain marketing initiatives, such as marketing to the INSPIRE related European market have been curtailed by the travel bans in effect.

The Company has also implemented a number of operational changes. Employees have been requested to work from home, and a temporary four-day work week is in effect to reduce employee costs by approximately 20%. Two staff positions were in the process of being eliminated for operational reasons prior to the pandemic, and those positions are not being replaced at this time. The Company is experiencing some reduction in costs and has implemented cost control and reduction procedures wherever possible.

Changes in Operations and Activities during the Period

On February 10, 2020, the Company provided a general corporate update which announced the completion of its proprietary artificial intelligence reasoning technology. The TERRA Mining AI Suite was launched in January at AME Roundup, Western Canada's largest minerals and mining conference. January also saw the launch of Minerva's GAIA Natural Hazard AI Suite. GAIA's landslide application is market ready, with projects completed for areas of Western Canada and Italy. Minerva intends to debut a new flood-based GAIA application this spring and initial work has been conducted for a GAIA wildfire application. Both of these product launches are intended to be tied to contracts. Minerva is also extending GAIA to provide risk management measures in products for the insurance industry.

On April 7, 2020, the Company announced that Mr. Craig Tuckman joined the board of directors, replacing Mr. Guy Elliott, who resigned. Mr. Tuckman is the head of marketing, Metals Americas, for Mitsui Busan Commodities (USA) Inc., where his responsibilities have included business development for Americas Metals clients, marketing team management, new product development and desk support since he joined in 2016.

On April 9, 2020, the Company announced a contract with White Gold Corp., implementing Minerva's artificial intelligence solutions across the JP Ross, Vertigo and Titan properties. WGO owns a portfolio of 22,040 quartz claims across 35 properties covering over 439,000 hectares, representing over 40% of the Yukon's White Gold District.

The Company has been awarded a contract with Natural Resources Canada. In partnership with Ebbwater Consulting Inc. the Company will undertake a year long project to produce a National Flood Hazard data layer for all of Canada. This project will Leverage the SOLACE workflow and tools to consolidate and standardize Canadas existing flood maps.

Description of the Business

Minerva aims to bring the benefits of artificial intelligence technology to industries dependent on reasoning with complex technical and scientific data by building proprietary evidence-based decision-making software. We are knowledge engineers using AI and standards to describe, reason, explain and provide actionable and auditable advice for our customers. Minerva's AI combines machine intelligence with human intelligence to reach conclusions faster than possible with humans alone, but with the explanations needed to trust the results. The Company is currently pursuing two industries: Geology and Natural hazards.

Minerva's proprietary AI platform (the "Software") consists of the AI software acquired from Georeference Online Ltd. ("Georeference"), as enhanced and re-engineered by Minerva to take advantage of recent developments in various related software technologies. The Software combines human domain expertise (e.g., mineral exploration or natural hazard models) with information from public and private databases in a cognitive computer reasoning system to carry out complex tasks faster and more thoroughly than can be done by human beings. Knowledge engineering, logic programming and reasoning with uncertainty are key elements of Minerva's Software. Minerva

has also developed in-house expertise in complementary areas, such as augmented reality, and updated taxonomies for use in knowledge representation, and has assembled a team of software and earth science professionals knowledgeable in the technologies it uses.

Minerva's Software has been developed to function in multiple diverse problem domains. In each domain in which it is deployed, a key element of its effective operation is the domain knowledge base and models deployed alongside the available voluminous and otherwise unwieldy data to which such knowledge base and models are applied.

Minerva initially applied its technology to minerals exploration due to its extensive knowledge-base in economic geology; however, the Software is applicable to other industries with complex problem domains, such as environmental protection, geohazards, land use planning, insurance and healthcare. The Software also has potential applications with respect to the European Union's ten-year INSPIRE initiative. See below.

Minerva believes that there will be significant growth in Artificial Intelligence Software-as-a-Service (AI-SaaS) over the next decade. Due to relatively limited and unique datasets and scarce AI talent, it is unlikely that a large number of enterprises will build their own proprietary software. Instead AI service providers, such as Minerva, will emerge with the necessary AI expertise and domain specific knowledge base to provide value-added AI services.

Principal Products

The principal existing products have been structured within two industry specific product suites: TERRA Mining AI Suite and GAIA Natural Hazard AI Suite. Non industry specific products are promoted as Cross-Industry applications. In addition to the software suites, Minerva also sells consulting services to aid customers.

Cross – Industry

Reasoner

The Reasoner is the crux of Minerva's product offering, it is a cognitive AI system which integrates human knowledge with large datasets to create predictions. The Reasoner is proprietary to Minerva and is continuously undergoing refinement and expansion of capabilities. Predictions from the Reasoner are explainable and auditable, a unique advantage over many AI applications. As detailed further in the "Intellectual Property" section below, Minerva applied for two patents to protect the core technology and processes underpinning Minerva's core technology.

SOLACE

SOLACE standardizes disconnected data to ensure interoperability. SOLACE enables organizations to create and curate standards and design self-improving workflows to align current and future datasets. Controlled vocabularies are built and validated by Minerva's ACE software, and project data is aligned and transformed with Minerva's DBConverter. With each alignment, the system learns common misspellings, alternative labels, and legacy codes making each sequential alignment quicker.

SOLACE was developed internally as a workflow for taking unstandardized, disorganized data and harmonizing that data into a form that we could use within the Reasoner. When approached by clients who only desired this data cleaning service, we bundled the workflow and necessary tools into one cohesive workflow product.

ACE

The Aristotelian Class Editor (ACE) is an open access taxonomy creation tool provided by Minerva. Providing ACE for free creates inroads with customers who are interested in knowledge engineering, semantics and standard terminology.

TERRA Mining AI Suite

TERRA represents a collection of AI products addressing challenges in mineral exploration and mining.

Target (formerly MineMatch®)

While a significant amount of capital has been spent on collecting exploration data over the years, it has led to databases that are too vast and complex for geologists to effectively evaluate. At the same time there is not enough data characterizing existing mineral deposits for machine learning techniques to be broadly successful. Mineral deposits are rare and complex with many different attributes.

Minerva's Target system is powered by Minerva's Reasoner, the core AI technology developed by Minerva. Target addresses both discovery difficulty and data volume problems. Minerva optimizes mineral deposit discovery by leveraging the computational efficiency along with proven legacy technologies such as geological modelling. This optimum combination of AI technologies allows Minerva to find the best locations at which to conduct exploration, and the Reasoner allows us to explain why each location was identified, and to provide advice on what additional exploration information to look for at such locations.

The principal market for Minerva's Target system lies with mineral exploration companies and institutions, both governmental and non-governmental, that promote minerals exploration, such as geological surveys and the government bodies.

The latest version of the Target system was tested during 2020, and has been marketed as a fully operational product since September 2018, producing maps for a number of client companies. Minerva intends to apply its Target system as a software service for enhancing the success rate of minerals exploration.

LEO Pro (formerly MinSem)

LEO Pro (Language Expander and Organizer) is a semantics-based system for managing digital knowledge assets. The LEO system provides users with rapid, intelligent discovery of documents by indexing these documents against a standards-based taxonomy and a document repository. This platform addresses the need within mining companies to achieve interoperability between their exploration, mining, metallurgical and environmental remediation knowledge assets, which is achievable only through implementation of semantic standards, the latter being a field within which Minerva has specialist expertise.

LEO (formerly MinSem Lite) is a scaled-down version of LEO Pro which addresses the knowledge-management needs of minerals exploration companies which are not engaged in mining, and hence do not invest heavily in mining, metallurgical and environmental assets. LEO is a system for the management of digital knowledge and includes pre-loaded geoscience taxonomies, a customizable automatic tagging system, and a front-end search function that allows users to interrogate their document repository.

Both platforms allow companies to use related semantics-based AI systems, such as those provided by Minerva, to greater effect.

DRIVER

DRIVER is a tool for interpreting drilling data for entire suites of multi-element assays in dozens of different directions and then comparing the results for significance against known mineral deposit zonation characteristics. This approach facilitates the identification of alteration and mineralization zones that may relate to economic mineralization, which are very difficult and time-consuming to identify any other way. Interrogation of multi-element data and evaluation of their high and low zones can refine an exploration hypothesis and focus the drilling decision process. It can also provide critical information about associated deleterious elements and their spatial relationship to ore.

Many mineral deposits models, such as the Porphyry Cu model, have element zonation patterns that are well-documented and characteristic of the model, but require a multi-element approach to identify. DRIVER uses a combination of geostatistical methods and spatial statistics to create hundreds of realizations of any input drilling data set. It then searches all these realizations for zones of high and/or low values which match documented zonation around known deposits, which therefore may be useful exploration vectors for the user to investigate. DRIVER provides a user-friendly interface for human evaluation of the relationships between the different zones flagged by DRIVER as potentially important.

GAIA Natural Hazard AI Suite

GAIA represents a collection of products addressing the need to identify hazard and risk associated with natural events such as landslides, floods, wildfires and earthquakes. The GAIA suite is currently being marketed to land planners, emergency managers and insurance related markets.

GAIA for landslides (formerly HazardMatch™)

GAIA for landslides produces interactive hazard maps for a variety of different landslide types over an area of interest. Access to the maps is available for a monthly cost based on number of users. This SaaS model is in addition to a project set up fee. The system is powered by Minerva's Reasoner which integrates large datasets to identify locations that are most at risk of slope failure. Over the past year this application has become extremely sophisticated, automatically generating new maps every day based on rainfall and temperature data and forecasts. Landslide runout modelling is conducted automatically for the most dangerous areas, this allows users to identify which locations might be impacted by the potential landslide.

GAIA for Landslides has been deployed in a study area covering over 30 000 square kilometers around the Vancouver, Squamish, and Whistler areas of British Columbia, Canada. This application can be seen by visiting (<https://www.minervageohazards.com/>). As mentioned below in the Awards section of this document, GAIA for landslides has also been deployed in the Veneto region of Italy. The system is currently being expanded to integrate risk assessment more directly which will make the product more appealing to the insurance industry.

GAIA for floods

GAIA for floods is an application currently under development to display high resolution real-time flash flood risk in urban centers. The app is designed to target the emerging Canadian residential flood insurance market. The pricing model will be the same as that of GAIA for landslides. The risk assessments are based on established methods, enhanced by expert-based cognitive AI (the Minerva Reasoner) to help users interpret the results. Development began in Q4, 2019, with a detailed review of the available methods, competitors and target markets, and a functional prototype is expected to be completed by the end of Q2, 2020.

The prototype application covers the entire extent of North Vancouver, British Columbia, Canada, and uses 24- and 48-hour rainfall forecasts as inputs to a numerical model that predicts water depth and velocity (flood hazard). The hazard data is then intersected with asset-level information to estimate which buildings are most at risk. The results will be completely auditable, thereby enabling users to drill down to understand the score assigned to each asset. The floods model is also being used to validate risk-assessment methods using the Minerva Reasoner, which will be transferable to other natural hazards, such as landslide, wildfire and earthquake.

GAIA for wildfires

Minerva's Reasoner is well suited to predict wildfire susceptibility, hazard and risk. Over the past year Minerva has initiated development of this capability which is currently being demonstrated to prospective clients in order to assess the market potential of the technology.

Awards

On October 30, 2019, the Company announced that Minerva had won the *INSPIRE Helsinki 2019 Data Challenge*. Minerva's "*Landslide Application for Veneto, Italy*", entered under the "Let's make the most out of INSPIRE" category, was the overall winner of the Challenge.

The full results of the challenge can be viewed at <https://challenge.inspire-helsinki-2019.fi> Minerva's winning entry can be viewed at: www.italy.minervageohazards.com

INSPIRE is a European Union Directive that creates a standardized spatial data infrastructure for the purposes of EU environmental policies. Each year an INSPIRE Conference is held to provide a forum for stakeholders from government, academia and industry, with the conference being held on October 22-24th 2019 in Helsinki, Finland. The conference highlights innovative practical uses of spatial data in such domains as the sea, weather and cities.

The legislated standardization of mapping data within the EU pertains to 34 spatial themes with many themes having multiple specified "code lists" of words which are permitted for use. Many of these "code lists" are complex and hierarchical. All future spatial data provided by public agencies in Europe will be INSPIRE-compliant.

Standardized vocabularies incorporate complex hierarchies which require sophisticated semantic reasoning to yield useful results when the maps are used to achieve various industrial and social objectives. Three of the more complex taxonomies embedded in the INSPIRE standards relate to geology, with which Minerva is already very familiar, and to land use and land cover, which Minerva has already begun embedding into its taxonomic reasoning system.

Minerva is well positioned to compete in this market because its technology is tightly-aligned, for auditing and explainability purposes, while adhering to data and terminology standards. Minerva is working with a number of the INSPIRE committees responsible for creating the standards for the data and is contributing to its improvement by identifying problems in the standards when the data is of insufficient quality for use with Minerva's technology.

Future Applications

One of the key elements of Minerva's AI Software is the powerful logical structure it applies to the terms with which it reasons, incorporating, when appropriate, taxonomies defined strictly according to the Aristotelian principles described in two books on AI co-authored by Professor David Poole, Minerva's Chief Software Architect and Alan Mackworth, the Chair of the board of directors. Without reference to such taxonomies, it is difficult to engineer AI applications which emulate intelligent reasoning as it would be carried out by a human expert. Minerva believes that its unique taxonomically-empowered approach to cognitive computing will enable it to enter markets which require an appropriate AI framework applied to complex knowledge and data.

Consequently, Minerva plans to develop future applications. The development of additional products is dependent on establishing a market opportunity, finding appropriate partners, and obtaining any specific resources required in the specific market. While management intends to explore any reasonable opportunity, there is no assurance that additional products will be successfully developed and marketed.

Operations

Minerva conducts its operations using a combination of full and part-time employees, supplemented by independent contractors where additional part-time, short term, or specialized services are required. As of May 2020, the Company had 18 employees. In addition, certain individuals or companies are regular consultants to the Company, providing services as required.

The R & D development team is based at the Company's principal operating office in Vancouver, British Columbia.

Marketing Plans and Strategies

In 2019, the Company hired a Business Development Manager who is actively building a client base in the mining and exploration and natural hazards industries through various traditional and digital marketing initiatives.

The Company's products are being marketed to pre-qualified leads around the world. The Business Development team is actively reaching out to promising candidates for Minerva's various software applications, identified using Minerva's existing database of industry contacts, as well as those identified via industry events, publications, and intelligence initiatives.

Minerva's efforts include direct digital marketing and advertising, conference attendance, trade publications, media engagement, and active communication with various media outlets. The Company continues to expand its network and establish mutually beneficial strategic relationships which will also allow Minerva to expand by future acquisition and/or partnership opportunities, including new technologies that may complement its business. The Company has also established a subsidiary office in Germany to assist with its marketing efforts in Europe.

Intellectual Property

In accordance with industry practice, Minerva protects its proprietary rights through a combination of copyright, trade-mark, trade secret laws and contractual provisions. The source code for its Software is protected under Canadian and applicable international copyright laws. Minerva licenses its Software pursuant to agreements that impose restrictions on customers' ability to use the technology, such as prohibiting reverse engineering, limiting the use of software copies and restricting access and use of source code. Minerva also seeks to avoid disclosure of intellectual property and proprietary information by requiring employees and consultants to execute non-disclosure and assignment of intellectual property agreements. Such agreements require employees and consultants to assign to Minerva all intellectual property developed in the course of their employment or engagement. Minerva utilizes non-disclosure agreements to govern interaction with business partners and prospective business partners and other relationships where disclosure of proprietary information may be necessary. The Company has applied for two patents on its intellectual property.

Results of Operations

Results for the three-month period ended March 31, 2020

During the three-month period ended March 31, 2020, the Company recorded revenue of \$53,000 (2019: \$140,600) reflecting the timing of a major contract that was entirely completed in Q1 2019. A similar sized contract was signed in Q1 2020, however that contract has a 15-month duration with revenue spread over that period.

Expenses from operations were \$917,917 (2019: \$701,469), and the comprehensive loss for the period was \$613,450 (2019: \$709,065).

The most significant elements of the Company's expenses are:

- Advertising and promotion of \$64,070 (2019: \$45,818) reflect increased amounts being spent on the promotion of the Company and its products to potential customers and investors, as well as investor relations activities;
- Amortization of \$45,202 (2019: \$39,271) reflects the amortization of leasehold improvements, computer equipment and furniture acquired, the amortization of intangible assets, and the amortization of the right to use asset;
- Consulting – Corporate development of \$26,198 (2019: \$72,519) was due to the use in 2019 of outside advisors during the process of structuring, funding, and completing the going public process. The 2020 expense reflected certain limited advisory activities;
- Consulting – Product development of \$39,163 (2019: \$139,111) resulted from the use of outside consultants in specific areas to develop specific products and product inputs where that capability was not in-house. In late 2019 and 2020 most of the consultants were eliminated, or were replaced by employees as the Company moved to normalize its operations, resulting in the expense being reflected in salaries;
- Directors fees of \$31,500 (2019: \$nil) are paid to independent directors as a result of the Compensation Committee and the Board of Directors establishing for independent directors and committee chairs a fee of \$3,000 and \$4,500 per month respectively for their contributions to the Company;
- General and administrative expenses of \$35,044 (2019: \$27,958) reflect the operations of the Company, and include the cost of diverse items such as insurance, internet and telephone and other general office expenses;
- Outsourced services expense of \$31,800 (2019: \$49,900) consists of the cost of third-party service providers which were contracted related to a specific project based on their expertise;
- Professional fees were \$25,119 (2019: \$20,912) consisting of legal, accounting, tax and other professional advisory expenses;
- Salaries and wages of \$571,158 (2019: \$234,874) reflect the increase in the number of employees in Q1 2020 compared to the previous year, as well as the conversion of consulting positions to employees, and illustrate the effective growth of the operations of the Company. Certain cost controls implemented as a result of the pandemic had minimal impact during this quarter;
- Share-based compensation of \$4,293 (2019: \$15,152) resulted from the timing of vesting of previously issued options;
- Software application subscriptions of \$16,528 (2019: \$20,095) reflect the cost and timing of renewals of licensed software used by the Company in the development of products;
- Transfer agent and filing fees of \$6,384 (2019: \$nil) are incurred as a result of administering a public Company and making appropriate regulatory filings;

Minerva Intelligence Inc.
Management Discussion and Analysis
For the three-month period ended March 31, 2020

11

- Travel of \$21,458 (2019: \$35,859) was incurred to meet with clients, potential funders and strategic partners, and to attend trade shows to promote the products of the Company;
- A foreign exchange gain of \$241,714 (2019: a loss of \$147,613) was recognized during the period reflecting the volatility of US dollar funds held by the Company. The conversion rate for the US dollar relative to the Canadian dollar peaked at the time of the preparation of the December 31, 2018 financials of the Company and had declined in Q1 2019. In Q1 2020, the rate climbed to new highs. During this period and subsequently, the Company converted some of its US dollar holdings to Canadian dollars to lock in the positive exchange rate. Future results will be subject to fluctuation based on balances held and converted to Canadian funds;
- Interest expense of \$1,331 (2019: \$583) was incurred with respect to the lease liability; and
- Interest income of \$11,084 (2019: \$nil) was recorded due to investments in US and Canadian dollar denominated term deposits. There was no term deposit interest in Q1 2019.

Quarterly Summary

The following table summarizes selected financial information of the Company for the periods available.

	Fiscal 2020		Fiscal 2019	
	3/31/2020	12/31/2019	9/30/2019	6/30/2019
	Q1	Q4	Q3	Q2
	(Unaudited)	(Unaudited)	(Unaudited)	(Unaudited)
	\$	\$	\$	\$
Revenue	53,000	12,000	-	32,000
Operating expenses	(917,917)	(1,025,875)	(708,255)	(728,381)
Other items	251,467	(58,180)	67,775	(972,017)
Net Income (Loss)	(613,450)	(1,072,055)	(640,480)	(1,668,398)
Current Assets	3,396,915	4,106,287	4,886,906	5,439,535
Total Assets	3,896,658	4,648,231	5,418,532	6,008,873
Total Liabilities	285,353	427,769	286,715	233,437
Shareholders' Equity	3,611,305	4,220,462	5,418,532	5,775,436

	Fiscal 2019		Fiscal 2018	
	3/31/2019	12/31/2018	9/30/2018	6/30/2018
	Q1	Q4	Q3	Q2
	(Unaudited)	(Unaudited)	(Unaudited)	(Unaudited)
	\$	\$	\$	\$
Revenue	140,600	7,750	20,000	-
Operating expenses	(701,469)	(964,743)	(326,906)	(560,912)
Other items	(148,196)	426,782	(114,805)	128,938
Net Income (Loss)	(709,065)	(530,211)	(421,711)	(431,974)
Current Assets	6,017,256	6,684,578	6,905,443	5,238,987
Total Assets	6,619,372	7,139,270	7,379,307	5,604,558
Total Liabilities	284,358	110,343	106,395	123,178
Shareholders' Equity	6,335,014	7,028,927	7,272,912	5,481,380

Selected Annual Information

	Year ended		Period from
	12/31/2019	12/31/2018	Incorporation to
	(Audited)	(Audited)	the Year ended
	\$	\$	12/31/2017
			(Audited)
	\$	\$	\$
Revenue	184,600	27,750	-
Operating expenses	(3,163,980)	(1,491,342)	(408,813)
Other items	(1,110,618)	337,054	(21,798)
Net Income (Loss)	(4,089,998)	(1,126,538)	(430,611)
Current Assets	4,106,287	6,684,578	1,213,837
Total Assets	4,648,231	7,139,270	1,416,332
Total Liabilities	427,769	110,343	39,532
Shareholders' Equity	4,220,462	7,028,927	1,376,800

Financing Activities

During the three-month period ended March 31, 2020, there were no share issuances.

During the year ended December 31, 2019, the Company completed an amalgamation and a private placement which resulted in the following share transactions:

- 6,200,000 outstanding common shares were consolidated on a two-for-one basis, resulting in 3,100,000 shares outstanding;
- 38,575,005 post-consolidated common shares were issued in exchange for all of the outstanding shares of Minerva Canada at a price of \$0.255 per common share;
- 1,000,000 post-consolidated common shares were issued at a price of \$0.255 as a finder's fee; and
- 2,000,000 common shares were issued pursuant to a non-brokered private placement at \$0.075 per share to raise \$150,000. The CEO of the Company was the sole subscriber to the placement. No finder's fees were paid in connection with this placement.

As of March 31, 2020, and December 31, 2019, the Company has 44,675,005 shares issued and outstanding.

As of March 31, 2020, a total of 9,575,003 common shares were subject to escrow restrictions (2019: 9,575,003). All escrowed shares will be released from escrow as to 10% on completion of the QT (released), and an additional 15% every six months thereafter over 36 months.

Liquidity and Capital Resources

The Company's aggregate operating, investing and financing activities for the three-month period ended March 31, 2020 resulted in a cash decrease of \$779,620 (2019: \$754,646). As at March 31, 2020, the Company's cash balance was \$3,168,680 (December 31, 2019: \$3,948,299), and the Company had working capital of \$3,155,358 (December 31, 2019: \$3,731,254).

During the three-month period ended March 31, 2020, the Company paid \$nil to acquire equipment (2019: \$7,216). \$150.00 was received related to the sale of redundant furniture.

During the three-month period ended March 31, 2020 the Company capitalized \$179,479 as a right to use asset with respect to its leased premises. An adjustment was made in the current quarter of \$4,664 to reflect a revised estimate.

No other material capital expenditures were incurred.

Transactions with Related Parties

Key management personnel

Key management personnel include those persons having authority and responsibility for planning, directing and controlling the activities of the Company as a whole. The Company has determined that key management personnel consist of executive and non-executive members of the Company's Board of Directors and corporate officers. The remuneration of key management personnel during the three-month periods ended March 31, 2020 and 2019 was as follows:

	Three-month period ended	
	March 31,	
	2020	2019
Salaries and wages	\$ 183,958	\$ 107,509
Professional and consulting fees	18,000	15,000
Share-based compensation	76	15,152
	<u>\$ 202,034</u>	<u>\$ 137,661</u>

Certain comparative amounts in 2019 were reclassified as some related party consultants became salaried employees.

As at March 31, 2020 and December 31, 2019 accounts payable and accrued liabilities included \$6,000 (2019 - \$6,000) owing to David Poole, Chief Software Architect of the Company.

As at March 31, 2020 accounts receivable included \$9,842 (2019 - \$24,842 l) owing from a related party.

Other related parties

The remuneration of other related parties during the three-month periods ended March 31, 2020 and 2019 was as follows:

	Three-month period ended March 31,	
	2020	2019
Directors fees	\$ 31,500	\$ -
	-	-
	<u>\$ 31,500</u>	<u>\$ -</u>

Professional fees – capitalized consists of amounts capitalized to intangible asset development.

As at March 31, 2020 accounts payable and accrued liabilities included \$22,500 (2019 - \$10,500) owing to other related parties. Amounts due to related parties, including amounts due to key management personnel, at March 31, 2020 are unsecured and interest free.

Off Balance Sheet Arrangements

To the best of management’s knowledge, there are no off-balance sheet arrangements that have, or are reasonably likely to have, a current or future effect on the results of operations or financial condition of the Company.

Critical Accounting Estimates

The preparation of the consolidated financial statements requires management to make judgments and estimates and form assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and reported amounts of expenses and gains or losses during the reporting period. On an ongoing basis, management evaluates its judgments and estimates in relation to assets, liabilities and expenses, gains and losses. Management uses historical experience and various other factors it believes to be reasonable under the given circumstances as the basis for its judgments and estimates. Actual outcomes may differ from these estimates under different assumptions and conditions.

Estimates and assumptions that have the most significant effect on the amounts recognized in the consolidated financial statements include:

Share-based Payment Transactions related to Equities

The Company measures the cost of equity-settled transactions with employees by reference to the fair value of the equity instruments at the date at which they are granted. Estimating fair value for share-based payment transactions requires determining the most appropriate valuation model, which is dependent on the terms and conditions of the grant. This estimate also requires determining the most appropriate inputs to the valuation model including the expected life of the stock option, volatility and dividend yield and making assumptions about them.

Deferred tax assets

Deferred tax assets, including those arising from un-utilized tax losses, require management to assess the likelihood that the Company will generate sufficient taxable earnings in future periods in order to utilize recognized deferred

tax assets. Assumptions about the generation of future taxable profits depend on management's estimates of future cash flows. In addition, future changes in tax laws could limit the ability of the Company to obtain tax deductions in future periods. To the extent that future cash flows and taxable income differ significantly from estimates, the ability of the Company to realize the net deferred tax assets recorded at the reporting date could be impacted.

Economic recoverability and probability of future economic benefits of intangible assets and amortization

Management has determined that intangible asset costs incurred which were capitalized may have future economic benefits and may be economically recoverable. Management uses several criteria in its assessments of economic recoverability and probability of future economic benefits including anticipated cash flows and estimated economic life. The amortization expense related to intangible assets will be determined using estimates relating to the useful life of the intangible assets.

Judgments that have the most significant effect on the amounts recognized in the consolidated financial statements include:

Determination of functional currency

The functional currency of the Company is the currency of the primary economic environment in which it operates. Determination of the functional currency may involve certain judgments to determine the primary economic environment. The functional currency may change if there is a change in events and conditions which determine the primary economic environment. The functional currency of the Company and its principal operating subsidiary is the Canadian dollar. The functional currency of the German subsidiary is the Euro.

Changes in Accounting Policies

The accounting policies applied in the unaudited condensed consolidated interim financial statements are the same as those applied in the Company's annual audited financial statements for the year ended December 31, 2019. The reader is referred to those notes for a detailed discussion of the Company's accounting policies.

Financial Instruments

The Company is exposed to various financial risks resulting from its operations. The Company's management manages financial risks. The Company has not entered into financial instruments agreements, including derivative financial instruments for speculative purposes. The Company's main financial risk exposures and its financial policies are as follows:

Credit risk

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. The Company's cash and accounts receivable are exposed to credit risk, with the carrying values being the Company's maximum exposure. The Company's cash consists of deposit accounts with chartered banks. The Company's accounts receivable consist of contract payments due from governments and companies, with the carrying values also being the Company's maximum exposure. Management believes the Company's exposure to credit risk is not significant.

Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting obligations associated with financial liabilities. The Company's accounts payable and accrued liabilities are all current and due within 90 days of the

statement of financial position date. The Company seeks to ensure that it has sufficient capital to meet short term financial obligations after taking into account its operating obligations and cash on hand.

Market risk

Market risk is the risk of loss that may arise from changes in market factors such as interest rates, foreign exchange rates, and equity prices.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Company maintains certain cash balances in term deposits which renew periodically, and which rates reflect the market at the time of renewal. Management believes that the interest rate risk on these investments is nominal. The Company is not exposed to any other significant interest rate risk aside from the term deposits noted. Cash comprised bank balances and guaranteed investment certificates as of March 31, 2020 and December 31, 2019.

Foreign exchange risk

Foreign exchange risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Company is exposed to foreign exchange risk as it engages in transactions in other foreign currencies, from time to time. As at March 31, 2020, the Company held US cash of \$1,296,117 (December 31, 2019: \$2,868,640), converted to CAD at a rate of 1.4170 (2019: 1.3016). A 10% change in the foreign exchange rate would have an impact on profit or loss of \$129,612 (2019: \$286,864).

Price risk

Equity price risk is defined as the potential adverse impact on the Company's earnings due to movements in individual equity prices or general movements in the level of the stock market. The Company does not have any financial instruments which are exposed to this risk.

Outstanding Share Data

As at March 31, 2020, and the date of this MD&A the following table summarizes the outstanding share capital of the Company:

	March 31, 2020	Report Date
Common Shares	44,675,005	44,675,005
Stock Options	2,887,500	3,961,625
Total, Fully Diluted	47,562,505	48,636,630

During the three-month period ended March 31, 2020, 92,500 options expired unexercised.

Subsequent to the Quarter end, on April 7, 2020, the Company granted of 1,166,625 stock options to purchase 1,166,625 common shares of the Company. 85,000 stock options are exercisable at prices of 10 cents, 30 cents and 50 cents per share over a period of three years. 1,081,625 stock options are exercisable at a price of \$0.07 per share, in varying terms within the next 12 months.

Risks and Uncertainties

An investment in the Company's shares should be considered highly speculative due to the nature of the Company's business and the present stage of its development. In evaluating the Company and its business, the Reader should carefully consider the following risk factors in addition to the other information contained in this management discussion and analysis. These risk factors are not a definitive list of all risk factors associated with the Company. It is believed that these are the factors that could cause actual results to be different from expected and historical results. Investors should not rely upon forward-looking statements as a prediction of future results.

Effect of COVID-19 on Business operations

On March 11, 2020, the World Health Organization categorized COVID-19 as a pandemic. The potential economic effects within the entity's environment and in the global markets, possible disruption in supply chains, and measures being introduced at various levels of government to curtail the spread of the virus (such as travel restrictions, closures of non-essential municipal and private operations, imposition of quarantines and social distancing) could have a material impact on the entity's operations. The extent of the impact of this outbreak and related containment measures on the entity's operations cannot be reliably estimated at the date this report was prepared.

Business Model

The industry in which the Company operates is characterized by rapidly-changing Internet media, evolving industry conditions and standards, and changing user and client demands. Any evaluation of the Company's business and its prospects must be considered in light of these factors and the risks and uncertainties often encountered by companies in an evolving industry.

Some of these risks and uncertainties relate to the Company's ability to maintain and expand client relationships and respond effectively to competition and potential negative effects of competition on profit margins. If the Company is unable to address these risks, its business, results of operations and prospects could suffer.

Significant future capital requirements, future financing risk and dilution

No assurances can be provided that the Company's financial resources will be sufficient for its future needs. Revenues from current operations are insufficient to meet the Company's expected capital requirements. As such, the Company may be required to undertake future financings which may be in the form of a sale of equity or debt secured by assets. No assurances can be made that the Company will be able to complete any financing arrangements or that the Company will be able to obtain the capital that it requires. In addition, the Company cannot provide any assurances that any future financings will be obtained on terms that are commercially favourable to the Company.

Any such sale of Company shares, or other securities will lead to further dilution of the equity ownership of existing shareholders. Additionally, options and warrants or other conversion rights issued or granted by the Company may adversely affect future equity offerings, and the exercise of those options and warrants may have an adverse effect on the value of the Company shares. If any such options, warrants or conversion rights are exercised at a price below the then current market price, if any, then (i) the market price of the Company shares could decrease, and (ii) shareholders may experience dilution of his or her investment. The issuance of Company shares in the future will result in a reduction of the book value and market price of the then outstanding Company shares. If any such additional Company shares are issued such issuances will result in a reduction in the proportionate ownership and voting power of all current shareholders. Further, such issuance may result in a change of control of the Company.

A prolonged decline in the price of the Company shares could result in a reduction in the liquidity of the Company shares and a reduction in the Company's ability to raise capital. As a significant portion of the Company's operations will probably be financed through the sale of equity securities a decline in the price of the Company shares could be especially detrimental to liquidity.

Technological Change

The Company operates in business segments that are entirely dependent on technology. As such, technological change will impact the ability of the Company to expand and grow its business and will also affect the costs and expenses incurred by the Company, including capital requirements. The artificial intelligence market continues to experience rapid technological change. There is a risk that new technologies and standards may render the Company's software applications obsolete. The Company may be required to invest significant capital in new technology and software development to remain competitive. Failure to do so may adversely affect demand for the Company's products and services.

Share price volatility and liquidity

There is a limited market for the Company's shares, and the trading price may increase or decrease in response to a number of events and factors, both known and unknown. In addition, the market price of the Company shares will be affected by many variables not directly related to the Company's success and will therefore not be within the Company's control, including other developments that affect the market for all software and/or AI sector securities, the breadth of the public market for the common shares, and the attractiveness of alternative investments. The effect of these and other factors could cause the Company's share price to be volatile in the future.

The market price for the Company shares may also be affected by the Company's ability to meet or exceed expectations of analysts or investors. Any failure to meet these expectations, even if minor, may have a material adverse effect on the market price of the Company shares.

Regulatory requirements

The Company may be affected in varying degrees by government policies and regulations. Changes in government, regulations and policies and practices, beyond the control of the Company, could have an adverse impact on its future cash flows, earnings, results of operations and financial condition.

Limited Operating History

Minerva is in the early stage of development and has a limited history of operations in the AI sector. The Company will be subject to many risks common to start-up enterprises and its viability must be viewed against the background of the risks, expenses and problems frequently encountered by companies in the early stages of development in new and rapidly evolving markets such as the AI industry. This includes under-capitalization, cash shortages, limitations with respect to personnel, lack of revenues and financial and other resources. There is no assurance that the Company will develop its business profitably, and the likelihood of success of the Company must be considered in light of its early stage of operations. There is no assurance that the Company will be successful in achieving a return on shareholders' investment.

Management of Growth

The Company may be subject to growth-related risks including pressure on its internal systems and controls. The Company's ability to manage its growth effectively will require it to continue to implement and improve its operational and financial systems and to expand, train and manage its employee base. The inability of the Company to deal with this growth could have a material adverse impact on its business, operations and prospects. While management believes that the Company has made the necessary investments in infrastructure to process anticipated volume increases in the short term, the Company anticipates it may experience growth in the number of its employees and the scope of its operating and financial systems, resulting in increased responsibilities for the Company's personnel, the hiring of additional personnel and, in general, higher levels of operating expenses. In order to manage its current operations and any future growth effectively, the Company will also need to continue to implement and improve its operational, financial and management information systems and to hire, train, motivate, manage and retain its employees. There can be no assurance that the Company will be able to manage such growth effectively, that its management, personnel or systems will be adequate to support the Company's operations or that the Company will be able to achieve the increased levels of revenue commensurate with the levels of operating expenses associated with this growth.

Negative cash flow and absence of profits

Minerva has not earned any profits to date and there is no assurance that it will earn any profits in the future, or that profitability, if achieved, will be sustained. The success of the Company will ultimately depend on its ability to generate revenues from operations. There is no assurance that any future revenues will be sufficient to generate the required funds to develop the Company's business.

Protection of intellectual property rights

The future success of the Company's business will be dependent upon the intellectual property rights surrounding certain technology held by Minerva, including trade secrets, know-how and technological innovation. The Company's failure to protect its intellectual property could harm its ability to compete effectively. The Company is highly dependent on its ability to protect its proprietary technology. It intends to protect its rights vigorously; however, there can be no assurance that these measures will, in all cases, be successful. Enforcement of its intellectual property rights may be difficult. Also, competitors could independently develop technologies that are perceived to be substantially equivalent or superior to the Company's technologies. The Company may be subject to claims of intellectual property infringement. Other companies may claim that Minerva infringes their intellectual property, which could materially increase costs and materially harm the Company's ability to generate future revenue and profits. Although the Company does not believe that its products infringe on the rights of third parties, third parties may assert infringement claims against it in the future. Although most of Minerva's technology is proprietary in nature, it does rely to a limited extent on third party software.

Reliance on computer systems

The Company's information technology and internal infrastructure is susceptible to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Significant disruption to the availability of information technology and internal infrastructure could cause delays in research and development work. The Company would incur liability and development of products would be delayed if any disruption or security breach were to result in a loss of, or damage to, the Company's data. Additionally, the Company may rely on cloud service providers. Any outages or changes related to these cloud services and service providers may cause disruption to development and services at the Company.

Product liability exposure

The Company faces an inherent business risk of exposure to product liability and other claims in the event that the development or use of its technology or prospective products is alleged to have resulted in adverse effects. While the Company has taken, and will continue to take, what it believes are appropriate precautions, there can be no assurance that it will avoid significant liability exposure. A product liability claim could have a material adverse effect on the Company's business, financial condition and results of operations.

Management experience and dependence on key personnel and employees

The Company's success is currently largely dependent on the performance of the Company's directors and officers. The experience of these individuals is a factor which will contribute to the Company's continued success and growth. The Company will initially be relying on its board members and executive officers, as well as independent consultants and advisors, for most aspects of its business. The amount of time and expertise expended on the Company's affairs by each of the Company's management team and the Company's directors will vary according to the Company's needs. The loss of any of these individuals could have a material detrimental impact on the Company's business. The Company does not intend to acquire any key man insurance policies and there is, therefore, a risk that the death or departure of any key member of management, a director, or employee or consultant, could have a material adverse effect on the Company's business, operations and financial condition. Investors who are not prepared to rely on the Company's management team should not invest in the Company's securities. The management of the Company has limited history of past performance in managing a software and AI company, and the past performances of management in other positions are no indication of their ability to successfully manage the Company. If the experience of management is inadequate or unsuitable to manage the Company, the operations of the Company may be adversely affected.

Competition

The Company will face competition from other companies, some of which can be expected to have longer operating histories and more financial resources and experience than the Company. Increased competition by larger and better financed competitors could materially and adversely affect the business, financial condition and results of operations of the Company. There are other entities investing in the AI technology space and the Company expects this sector to grow. These companies may have an advantage and may have developed a more efficient operational or investment model. The Company may not have sufficient resources to continue on a competitive basis which could materially and adversely affect the business, financial condition and results of operations of the Company. To remain competitive, the Company will continue to invest in software development. Should competitors introduce new services/software embodying new technologies, the Company's technology may become obsolete and require substantial resources to compete successfully in the market for software and technology services.

Exchange Rate

The reporting and functional currency of the Company is the Canadian Dollar. A significant portion of the Company's anticipated future revenues and expenses may be in foreign currencies, such as the United States Dollar or the Euro. Future fluctuations in the value of the Canadian Dollar relative to these currencies will likely have a material impact on the Company's overall financial results. Appreciation of the Canadian dollar will potentially affect revenues and expenses.

Conflicts of interest

Certain of the Company's directors and officers are, and may continue to be, involved in the AI industry through their direct and indirect participation in corporations, partnerships or joint ventures which are potential competitors of the Company. Situations may arise in connection with potential acquisitions or opportunities where the other interests of these directors and officers may conflict with the Company's interests. Directors and officers of the Company with conflicts of interest will be subject to and must follow the procedures set out in applicable corporate and securities legislation, regulations, rules and policies.

Employee recruitment

Recruiting and retaining qualified personnel is critical to the success of the Company. The number of persons skilled in software development (and AI in particular) and marketing is limited and competition for such persons is intense. As the Company's business activity grows, the Company will require additional key executive, technical, operational, and administrative personnel. There can be no assurance that the Company will be successful in attracting, training and retaining qualified personnel. If the Company is not successful in attracting and training qualified personnel, the efficiency of its operations could be affected, which could have a material adverse effect on the Company's results of operations and profitability.

Uninsured or uninsurable risks

The Company intends to insure its operations in accordance with technology industry practice. However, given the novelty of the proposed business, such insurance may not be available, uneconomical for the Company, or the nature or level may be insufficient to provide adequate insurance cover. The Company may become subject to liability for hazards against which the Company cannot insure or against which the Company may elect not to insure because of high premium costs or for other reasons. The payment of any such liabilities would reduce or eliminate the funds available for operations. Payments of liabilities for which the Company does not carry insurance may have a material adverse effect on the Company's results of operations and financial position.

Litigation

The Company may become party to litigation from time to time in the ordinary course of business which could adversely affect its business. Should any litigation in which the Company becomes involved be determined against the Company such a decision could adversely affect the Company's ability to continue operating and the market price for the common shares and could use significant resources. Even if the Company is involved in litigation and wins, litigation can redirect significant resources. Litigation may also create a negative perception of the Company's brand.

OUR APPLICATIONS

CROSS INDUSTRY



REASONER



SOLACE



ACE

TERRA MINING AI



TARGET



LEO



DRIVER

GAIA NATURAL HAZARDS AI



LANDSLIDES



FLOOD



WILDFIRES

MINERVA INTELLIGENCE INC. (FORMERLY TWO OWLS VENTURES CORP.)