



**MINERVA** INTELLIGENCE

**Minerva Intelligence (Canada) Ltd.**  
(formerly Minerva Intelligence Inc.)

**Management Discussion and Analysis**  
of  
**Financial Position and Results of Operations**  
for the Three-Month period ended March 31, 2019

This report is dated May 29, 2019.  
(The "Report Date")

Suite 301 - 850 West Hastings Street  
Vancouver BC Canada V6C 1E1  
Tel.: 604-620-1051

### ***Introduction***

The following information should be read in conjunction with the unaudited condensed interim financial statements of Minerva Intelligence (Canada) Ltd. (formerly Minerva Intelligence Inc.) (“Minerva Canada” or the “Company”) for the three-month period ended March 31, 2019, as well as the audited financial statements for the year ended December 31, 2018.

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

Note 3 to the audited financial statements at December 31, 2018 describes the Company’s significant accounting policies, as well as new accounting pronouncements not yet effective. During the three-month period ended March 31, 2019, the Company’s critical accounting estimates and significant accounting policies have remained substantially unchanged, except for the adoption of IFRS 16, Leases, which was effective January 1, 2019. The reader is referred to notes 3, 6 and 8 of the unaudited condensed interim financial statements as of March 31, 2019 for a detailed discussion of the effects of the adoption of IFRS 16.

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 interim financial statements for the three-month period ended March 31, 2019 as well as the audited financial statements as of December 31, 2018 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 Business***

Minerva Canada was incorporated under the Ontario *Business Corporations Act* on May 17, 2017.

On April 23, 2019, the Company continued its jurisdiction of incorporation from Ontario to British Columbia, to become subject to the B.C. *Business Corporations Act* (“BCBCA”).

On May 28, 2019, the Company announced it had amalgamated with 1198574 B.C. Ltd. (a wholly owned subsidiary of the former Two Owls Ventures Corp. (“Two Owls”)) and continued as “Minerva Intelligence (Canada) Ltd.” under the BCBCA. The Company became a wholly owned subsidiary of Two Owls. The amalgamated company is referred to herein as “Minerva”.

See “Amalgamation with Two Owls Ventures Corp.” below.

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

Minerva Canada was incorporated for the purpose of acquiring artificial intelligence (AI) software previously developed and tested over a period of 17 years by Georeference Online Ltd. (“**Georeference**”). Georeference had developed a number of products and decided to pursue other business interests. Accordingly, Minerva purchased the AI software in July 2017.

The co-founders of Georeference, Professor David Poole and Mr. Clinton Smyth are now Chief Software Architect and CEO of Minerva, respectively.

Minerva Canada has re-engineered the software acquired from Georeference to take advantage of recent developments in various related software technologies. Since incorporation, Minerva Canada has also developed in-house expertise in augmented reality (as a platform for evaluation and delivery of exploration targets in 3D), updated taxonomies used in knowledge representation, begun development of new geoscience software applications and assembled a team of software and earth science professionals knowledgeable in the technologies it uses.

***Amalgamation with Two Owls Ventures Corp.***

On April 22, 2019, the shareholders of the Company approved the agreement (the “Agreement”) with Two Owls Ventures Corp. whereby Two Owls acquired all of the issued and outstanding shares of the Company (the “Transaction”).

On April 23, 2019, the Company continued its jurisdiction of incorporation from Ontario to British Columbia, to become subject to the B.C. *Business Corporations Act* (“**BCBCA**”).

On April 24, 2019 the Supreme Court of British Columbia granted the final order to allow the completion of the Transaction.

On May 28, 2019, Two Owls announced that it had received TSX Venture Exchange (the “Exchange”) final approval (“Exchange Approval”) to its arm’s length Qualifying Transaction (QT) as announced by news releases dated November 8, 2018 and April 4, 2019. The QT involved the Company acquiring all of the outstanding shares of Minerva Intelligence (Canada) Ltd. from the former holders thereof, in exchange for shares of Two Owls.

The shares of Minerva are expected to commence trading on the Exchange as a Tier 2 industrial issuer under the symbol “MVAI” on or about June 3, 2019.

Pursuant to the Agreement, the following were completed:

- (a) Two Owls completed a consolidation of its 6,200,000 outstanding common shares on a two-for-one basis (resulting in 3,100,000 shares outstanding);
- (b) Two Owls changed its name to “Minerva Intelligence Inc.” (“Minerva”);
- (c) Minerva Canada continued its jurisdiction of incorporation from Ontario to British Columbia, to become subject to the B.C. *Business Corporations Act*;
- (d) Minerva Canada amalgamated with 1198574 B.C. Ltd. (a wholly owned subsidiary of Two Owls) and continued as “Minerva Intelligence (Canada) Ltd.” under the BCBCA;

- (e) Two Owls issued an aggregate of 38,575,005 post-consolidated shares in exchange for all of the outstanding shares of Minerva Canada;
- (f) in addition, Two Owls issued (i) 1,000,000 post-consolidated shares as a finder's fee, and (ii) a total of 1,950,000 stock options in replacement of outstanding options in the capital of Minerva Canada, each new option entitling the holder to acquire one share of the combined company at the exercise price of \$0.2534 per share; and
- (g) Minerva Canada became a wholly-owned subsidiary of Two Owls.

The amalgamated company of Two Owls and Minerva Canada (Minerva) accordingly has issued and outstanding: (i) 42,675,005 shares; (ii) 310,000 stock options exercisable at \$0.20 per share; (iii) 200,000 agent's options exercisable at \$0.20 per share; and (iv) 1,950,000 stock options exercisable at \$0.2534 per share.

A total of 12,766,675 common shares will be subject to escrow restrictions, including 1,100,000 originally issued the Two Owls' principals upon listing the Company as a CPC, and 11,666,675 shares issued to new principals and others in connection with the QT. All escrowed shares will be released from escrow as to 10% on listing, and an additional 15% every six months thereafter over 36 months.

In addition (i) 3,416,665 shares are subject to resale restrictions over four months with 20% to be free trading on listing, with an additional 20% every month thereafter; and (ii) 5,166,665 shares will be subject to resale restrictions over 12 months with 20% to be free trading on listing, with an additional 20% every three months thereafter.

### ***Description of the Business***

Minerva's objective is to develop and market AI software products and services. In particular, Minerva aims to bring the benefits of AI technology to industries dependent on reasoning with complex technical and scientific data, and to the general public.

Minerva's proprietary AI platform, which is referred to as the MMI™ system (the "**MMI™ system**" or the "**Software**") consists of the AI software acquired from Georeference, as enhanced and re-engineered by Minerva. 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's MMI™ system 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. For this reason, Minerva gives its systems different names for the different domains within which it is deployed.

The principal existing products are:

- MineMatch®: identifies mineral exploration targets in exploration data sets which are too vast and complex for humans to effectively evaluate.
- HazardMatch™: identifies and evaluates landslide hazards. Management believes that this product has potential applications in additional areas having similar requirements, such as flooding.
- MetMatch™: identifies and manipulates data in a metallurgical context.

- MinSem: semantics platform to provide interoperability between digital assets, such as exploration, mining, metallurgical and environmental data.

Minerva initially applied its technology to minerals exploration due to its extensive knowledge-base in geology created over the past decade; however, the Software is equally 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 "*Principal Products*" below.

While companies may invest in their own AI technology, 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 reasoners. 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.

At this time, Minerva's revenue comes from providing AI consulting services based on use of the MMI™ system; however, Minerva aims to be principally an AI SaaS provider in two to three years with the majority of its revenue being generated by licensing use of the MMI™ system.

In relation to the minerals exploration industry, Minerva may also include in its consulting contracts provisions for a royalty and/or a cash bonus payment upon a successful discovery.

### ***Principal Products***

#### ***MineMatch***<sup>®</sup>

Minerva intends to apply its MineMatch<sup>®</sup> system (part of the MMI™ system) as a software service for enhancing the success rate of minerals exploration.

Minerva believes there is a large market opportunity for the application of artificial intelligence to mineral exploration. Mineral exploration is getting harder as much of the world has already been surveyed and fewer deposits are economically recoverable. Mining exploration spending peaked in 2012 at US\$21.5 billion and 2016 marked the fourth consecutive year of declining exploration expenditures. While global exploration spending rose to an estimated US\$8.4 billion in 2017 from US\$7.3 billion in 2016, it was still only approximately 40% of what it was at its peak.<sup>1</sup>

In mineral exploration, there is only a 5% success rate in brownfield exploration, and a smaller 0.5% success rate in greenfield exploration. This is compared to oil & gas exploration, which makes greater use of computer modeling and where there is an 88% success rate. Even in the most challenging deep-water environments, there is still a 40% success rate in oil and gas exploration.

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 MineMatch<sup>®</sup> system addresses both discovery difficulty and data volume problems. Minerva optimizes mineral deposit discovery by combining proprietary and open source AI technologies with other modern technologies such as augmented reality, and with proven legacy technologies such as geological modelling. This

---

<sup>1</sup> S&P Global Market Intelligence, World Exploration Trends, July 2018.

optimum combination of AI technologies allows Minerva to find the best locations at which to conduct exploration, 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 MineMatch® system lies with mineral exploration companies and institutions, both governmental and non-governmental, that promote minerals exploration, such as geological surveys and the World Bank. Minerva markets its services to these entities primarily through trade booths at conferences, and by maintaining a profile in industry journals.

The latest version of the MineMatch® system was tested during 2018, and has been marketed as a fully operational product since September 2018.

#### *HazardMatch™*

Geohazards need to be better understood so that risk can be accurately assessed and protection or mitigation measures put in place. Geohazards maps are increasingly being developed based on reasoning from features identified in LIDAR (Light Detection and Ranging) and other remote sensing data. Minerva is developing AI based solutions which reason with complex technical data sets – seeking solutions for geohazards such as landslides, floods and wildfires. Minerva's MMI™ system, which adheres to data and terminology standards for auditing and explainability purposes, is ideally suited to geohazard mapping.

HazardMatch™ is based on the product of the same name that was purchased by Minerva in 2017 from Georeference and is currently being re-engineered by Minerva. HazardMatch™ was demonstrated at the European Geosciences Union (EGU) General Assembly in Vienna in April 2019 raising interest in both academic and industry sectors.

Minerva has already successfully produced landslide susceptibility maps, which provided results with high accuracy in British Columbia.

Minerva's Landslide AI-SaaS product will be a version of the HazardMatch™ system which incorporates real-time and short-term historical information such as rainfall and seismic activity which can affect the scale of a hazard. Minerva's landslide hazard mapping capabilities are demonstrated in the Sea to Sky hazards website.

(<https://www.minervageohazards.com/>).

Minerva also intends to develop a Flooding AI-SaaS product, which will be an Internet-based flash flood hazard mapping system which incorporates short-term historical and predicted rainfall information, as well as real-time surface-topography-change information, if available.

#### *MetMatch™*

MetMatch™ is a version of MineMatch® adapted to assist metallurgists to rapidly determine the best method of metallurgically extracting metals from newly-discovered mineral deposits.

An essential aspect of metallurgical assessment is the comparison of ore characteristics with known classes of deposits, or with a range of unique ores exhibiting specific metallurgical characteristics, for the purpose of quickly identifying relevant metallurgical processes. MineMatch®, dealing with many of the metallurgical parameters of ores, offers a framework within which to compare ore types with metallurgical processes. Once matching ore types are identified, the metallurgist is able to go to the literature describing the metallurgical process or plant design used to treat that ore, potentially saving large amounts of research expenditure. Much of this literature is in the public domain because of the demands of Canada's National Instrument 43-101 legislation that prescribes standards of

disclosure for mineral projects and requires public mining companies to publish details of their proposed metallurgical processes in their feasibility studies.

#### *MinSem*

MinSem will be an AI semantics platform customized for management of medium to large mining companies' digital knowledge assets, such as their exploration and mining data. This platform will address 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.

MinSem Lite will be a scaled-down version of MinSem 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.

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

#### *INSPIRE*

While initially focused on applying AI to minerals exploration, Minerva is in the process of applying its Software in environmental protection, land-use planning and related insurance industries in the European Union (EU).

INSPIRE is the legislated standardization of mapping data within the EU pertaining to 34 spatial themes with each theme 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.

Under its ten-year-long INSPIRE initiative, the EU recently legislated that standardized vocabularies and data formats be used in 34 categories of municipal, provincial and national maps, which makes those maps highly amenable to value-add applications powered by AI application. 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, with 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. An industry is also developing around bringing many pre-2017 EU maps into compliance with the INSPIRE standard.

Minerva completed a demonstration version of its first mapping application based on INSPIRE standards in September 2018, and plans to have a commercial version available late in the second quarter of 2019.

All staff necessary for development of this application are already in the employ of Minerva. No research and development in this regard will be contracted out, and Minerva has sufficient funds to complete the application's commercial development.

### *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. Without reference to such taxonomies, it is very difficult to engineer AI applications which emulate intelligent reasoning as it would be carried out by a human expert.

The healthcare industry, and the medical science upon which it is built, is replete with hundreds of taxonomies, many of them very complex. Currently the healthcare industry is investing millions of dollars in developing "Cognitive Expert Advisor" AI-based systems to assist healthcare professionals and laymen alike to effectively address healthcare challenges in an environment of mass data collection.

Minerva believes that its unique taxonomically-empowered approach to cognitive computing will enable it to enter this market with significant commercial success by finding parties to partner with who have large medical knowledge bases, but who are without the appropriate AI framework within which to leverage that knowledge into cognitive expert advisor systems.

Consequently, once Minerva has proven its technology in the arenas of minerals exploration, geohazards and EU mapping-related applications it plans to seek partners with which to develop applications in healthcare.

Minerva management is also of the opinion that the Software provides multiple further opportunities to develop additional products, including but not limited to further enhancements of its existing Software. 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.

One area that Minerva is exploring is building applications for the general public that use open source data to make informed decisions or recommendations based on their surroundings. Given the growth in data coming from satellites and connected devices as part of the internet of things (IoT) and the low storage costs and accessibility offered through cloud services, there are now vast data sets held by public bodies and large companies that anyone can access. Minerva intends to apply its AI expertise to these open data sources to develop an AI SaaS application for use by the general public, which produces meaningful maps (either in 2D or 3D) which are not available anywhere else and provide information to make informed decisions on his/her surroundings.

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.

Minerva currently employs four software engineers to carry out coding of the MMI™ System, as well as a GIS (geographic information system) Analyst and a GIS/Augmented Reality Developer. The system is planned and designed by Minerva's CEO, as supported by Minerva's Chief Software Architect, the three software engineers and Minerva's GIS and Augmented Reality professionals.

Semantic aspects of Minerva's knowledge engineering tasks are researched and developed by Minerva's CEO and its Chief Technical Officer, Semantics, and the Section Head of the Economic Geology Section.



Geological knowledge expressed within the MineMatch® system is researched and developed by Minerva's CEO, its Economic Geology Section Head, its senior geologist, and by three expert advisors in the fields of mineral deposit models, geophysics and structural geology.

Geological knowledge expressed within the HazardMatch system is researched and developed by Minerva's CEO, its Chief Technical Officer, its Senior Geohazard Geologist (PhD in landslides), and by one expert advisor in the fields of natural hazards and geomorphology. Client projects focused on minerals exploration are carried out by Minerva's geologists.

Application of the MMI™ System to INSPIRE mapping in the EU is led by Minerva's CEO and GIS staff (one a graduate in geography, the other a graduate in environmental science) and coded by Minerva's software engineers.

Over the past year Minerva has developed skills and software to visualize geological datasets in Augmented Reality. Using both mobile and Microsoft HoloLens hardware, the Geospatial Section has and continues to utilize this development work to create custom applications for both companies and public institutions.

The R & D development team is based in Vancouver, British Columbia. The team's responsibilities include product management, software development and quality assurance. The product development team's focus is on adding new features, enhancements and capabilities.

The principal operating office of Minerva is located in Vancouver, British Columbia. Management is of the opinion that the current facilities are sufficient for the current needs of Minerva, and that suitable additional or substitute space will be available, if, as and when needed to accommodate planned expansions of our operations.

### ***Market***

The market for AI applications is expected to see strong growth in almost all industrial sectors over the next ten years. According to the International Data Corporation (IDC), worldwide spending on cognitive and AI systems will reach US\$77.6 billion in 2022, more than three times the US\$24 billion forecast for 2018. The compound annual growth rate (CAGR) for the 2017-2022 forecast period is projected to be 37.3%. Software is expected to be both the largest and fastest growing technology category during the forecast period, representing around 40% of all cognitive/AI spending with a five-year CAGR of 43.1%.<sup>2</sup>

### ***Marketing Plans and Strategies***

Minerva's objective is to develop and market AI software products and services. Minerva intends to generate new leads, progress sales opportunities and build brand awareness through our marketing programs. Specifically, Minerva intends to:

- (i) complete the development of its product offerings for minerals exploration, mining and processing, namely: MineMatch®, MetMatch™, and MinSem;
- (ii) complete the development of HazardMatch™ for use in the geohazards and flood insurance industries;
- (iii) release and market its AI SaaS products as they are completed; and
- (iv) expand its AI business to other industries, such as INSPIRE-mapping, environmental protection, land use planning and insurance.

---

<sup>2</sup> IDC, "Worldwide Spending on Cognitive and Artificial Intelligence," September 2018.

The Software is intended to be sold worldwide primarily through direct sales rather than using third-party resellers. The market sales model includes an inside sales team that prequalifies marketing leads and generates new opportunities for a direct sales team. Educating consumers about the advantages of Minerva's products is a primary objective.

Over the longer-term, Minerva also intends to develop AI SaaS applications based on open source data that can be used by the general public.

Minerva plans to establish a market presence within the minerals, land use and environmental industries via direct marketing, conference attendance, industry publications, advertising, etc. Minerva intends to expand its network and establish strategic relationships that are mutually beneficial which will also allow Minerva to expand by future acquisition and/or partnership opportunities, including new technologies that may complement its Business.

Minerva currently markets its services primarily through trade booths at conferences, and by maintaining a profile in industry journals. Minerva recently hired a Business Development Scientist and intends to continue to expand its marketing/business development team as it completes development of new products. The Company has reviewed its options with respect to establishing an office in Germany to assist with its marketing efforts in Europe, and expects to establish a German subsidiary in late Q2 or early Q3.

### ***Competitive Conditions***

While both semantic networks and probabilistic reasoning are mature fields of research in their own right, little research has been carried out on combining them, and no other known commercial applications have built on such a combination, other than that done by Minerva.

The known principal competitors to Minerva's services are Beak Consultants GmbH and their Advangeo system, GoldSpot Discoveries Inc., Earth AI Operations Australia Pty Ltd, Azimut Exploration Inc., Mira Geosciences Ltd., Albert Mining, OreFox, and IBM/Goldcorp's Watson for mining. The approaches of these companies vary; however, they are all broadly aligned under supervised and semi-supervised machine learning methods and, with the exception of Watson, are focused on the minerals exploration industry. As of the date of this report, management is of the opinion that none of these companies utilize semantic AI or ontologies to any significant degree, or in a manner similar to the approach taken by the Company.

Minerva differs from these competitors in that it operates on the premises that (a) not enough mineral deposits have been found to adequately train machine learning algorithms and that (b) human intelligence expressed within computers will achieve better success rates overall than machine learning alone.

Minerva has the additional advantage that its MMI™ system can apply knowledge bases within multiple industries to solving problems in those respective industries. It is therefore not tied to developing products only for the exploration industry. Accordingly, Minerva believes that its competitors which are solely focused on minerals exploration will be limited in their growth. Minerva, on the other hand, has an opportunity to grow its business by marketing its AI technology across multiple industries.

Minerva intends to distinguish itself from other AI technology companies by addressing two limitations often found in AI applications today – lack of explainability and reliance on large labeled data sets to provide training sets. While key components of Minerva's MMI™ system, such as semantic networks and probabilistic reasoning, have been used for decades there has been little research on their use in combination.

***Intellectual Property***

Minerva's proprietary AI platform, which is referred to as the MMI™ system, consists of the AI software acquired from Georeference as enhanced and re-engineered by Minerva. The MMI™ system combines proprietary and open source AI technologies with other modern technologies such as augmented reality.

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 intends to license 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 also 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.

Minerva has registered the trade-mark MineMatch® in Canada and has registered and maintains a number of domain names as appropriate for future business activities.

The enforcement of intellectual property rights depends on any legal actions against any infringers being successful, but these actions may not be successful or may be prohibitively expensive, even when Minerva's rights have been infringed.

***Significant Acquisitions and Dispositions***

Georeference's AI assets (primarily software and intellectual property) were acquired by Minerva for US\$100,000 (C\$123,490) on July 28, 2017. At that time, Minerva entered into an employment agreement with Mr. Smyth and a consulting agreement with Professor Poole.

During the year ended December 31, 2018, the Company capitalized \$270,155 of salaries, wages and consulting fees related to research and development work and re-engineering the software (2017: \$53,627). During the three-month period ended March 31, 2019, there were no amounts capitalized.

The capitalized acquisition cost and additional related expenditures as of March 31, 2019 and December 31, 2018 was \$447,272. Amortization of \$22,363 was recorded during the three-month period ended March 31, 2019 (year ended December 31, 2018: \$22,364).

**Minerva Intelligence (Canada) Ltd. (formerly Minerva Intelligence Inc.)**  
**Management Discussion and Analysis**  
**For the three-month period ended March 31, 2019**

12

**Results of Operations**

As the Company was incorporated on May 17, 2017, only certain comparative quarterly results were prepared as the Company was a non-reporting issuer. The following table summarizes selected financial information of the Company for the periods available.

	Fiscal 2019	Fiscal 2018			
	3/31/2019	12/31/2018	9/30/2018	6/30/2018	3/31/2018
	Q1	Q4	Q3	Q2	Q1
	(Unaudited)	(Unaudited)	(Unaudited)	(Unaudited)	(Unaudited)
	\$	\$	\$	\$	\$
Revenue	140,600	7,750	20,000	-	-
Operating expenses	(701,469)	(603,524)	(326,906)	(361,219)	(199,693)
Other items	(148,196)	322,921	(114,805)	103,861	25,077
Net Income (Loss)	(709,065)	(272,853)	(421,711)	(257,358)	(174,616)
Current Assets	6,017,256	6,684,578	6,905,443	5,238,987	1,081,202
Total Assets	6,619,372	7,139,270	7,379,307	5,604,558	1,338,099
Total Liabilities	284,358	110,343	106,395	123,178	90,462
Shareholders' Equity	6,335,014	7,028,927	7,272,912	5,481,380	1,247,637

**Results for the three-month period ended March 31, 2019**

During the three-month period ended March 31, 2019, the Company recorded revenue of \$140,600 reflecting the timing of the completion of contracts (March 31, 2018; \$nil). Expenses from operations and the cost of subcontracts related to the revenues earned were \$701,469 (2018: \$199,693), and the comprehensive loss for the period was \$709,065 (2018: \$174,616). The comparative results for the period ended March 31, 2018 reflect the early start-up operations of the Company at that time prior to significant increases in staffing and contractors, for example.

The growth in expenses in Q1 2019 continues to reflect the addition of staff and consultants during the period, as the Company has accelerated its work on additional projects and product and market development. Management expects expenses to increase in future quarters, albeit at a reduced rate, as additional employees are added to further the Company's products and activities.

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

- Advertising and promotion of \$45,818 (2018: \$14,286) reflect increased amounts being spent on the promotion of the Company and its products to potential customers and investors;
- Amortization of \$39,271 (2018: \$nil) reflects the amortization of computer equipment and furniture acquired, and the initial amortization of intangible assets in the year of \$22,363 (2018: \$nil). A further significant addition is the amortization of the right to use asset of \$13,137 (2018: \$nil);
- General and administrative expenses of \$27,958 (2018: \$9,109) includes the cost of general office operations, including primarily rent in Q1 2018. In 2019, with the transition to the right of use asset, the largest expense of office occupancy costs of \$6,826 reflects only a portion of the cost of office space as the balance of the occupancy costs are reflected in amortization above and interest expense below. The balance of the expenses in Q1 2019 reflect the cost of diverse items such as insurance, internet and telephone and other general office expenses;

- Outsourced services expense of \$49,000 (2018: \$nil) consists of the cost of third party service providers which were specifically hired to prepare code or project components based on their expertise;
- Professional fees were \$232,542 (2018: \$88,264) consisting of legal, accounting, consulting and contractor expenses. \$72,520 (2018: \$25,529) of consulting fees related to the Company's activities with respect becoming a public company, while \$139,111 (2018 \$48,682) of consulting expenses were incurred to advance the projects and products of the Company;
- Salaries and wages of \$234,874 (2018: \$29,293) reflects the relative number of employees and the direct cost of employees of the Company;
- Share-based compensation of \$15,152 (2018: \$45,455) resulted from the timing of vesting of previously issued options;
- Software application subscriptions of \$20,095 (2018: \$2,026) reflect the cost and timing of renewals of licensed software used by the Company in the development of products as well as the relative number of employees using software in the Company's operations;
- Travel of \$35,859 (2018: \$11,260) was incurred to meet with clients, potential funders and strategic partners, and to attend trade shows in Canada and Europe;
- A foreign exchange loss of \$147,613 (2018: a gain of \$25,077) was recognized during the year reflecting the volatility of the US dollar funds held by the Company. Future results will be subject to fluctuation based on balances held and converted to Canadian funds; and
- Interest of \$583 (2018: \$nil) was incurred with respect to the lease liability discussed above.

Generally, the above expenses were higher in the three-month period ended March 31, 2019 compared to the comparable period in 2018 due to the expansion of operations and staffing levels.

**Selected Annual Information**

As the Company was incorporated on May 17, 2017, only two years of comparative annual financial results are available.

	<b>Year ended 12/31/2018 (Audited) \$</b>	<b>Period from Incorporation to the Year end 12/31/2017 (Audited) \$</b>
Revenue	27,750	-
Operating expenses	(1,491,342)	(408,813)
Other items	337,054	(21,798)
Net Income (Loss)	(1,126,538)	(430,611)
Current Assets	6,684,578	1,213,837
Total Assets	7,139,270	1,416,332
Total Liabilities	110,343	39,532
Shareholders' Equity	7,028,927	1,376,800

**Financing Activities**

Since the date of incorporation on May 17, 2017, Minerva Canada has completed private placement financings which resulted in the following share issuances:

	<b>Price (US\$)</b>	<b>Number of Shares</b>	<b>Total (US\$)</b>
May 17, 2017	\$0.001	1	\$0.001
June 20, 2017	\$0.001	3,500,000	3,500
July 14-28 2017	\$1.00	1,025,000	1,025,000
Sept. 13-29, 2017	\$1.00	240,000	240,000
April 12-24, 2018	\$1.00	1,500,000	1,500,000
May 10, 2018	\$2.50	20,000	50,000
May 24-July 12, 2018	\$2.50	870,000	2,175,000
Sept. 4-11, 2018	\$2.50	560,000	1,400,000
		<b>7,715,001</b>	<b>\$6,393,500</b>

On May 28, 2019, Two Owls announced that it had received TSX Venture Exchange (the "Exchange") final approval ("Exchange Approval") to its arm's length Qualifying Transaction (QT) as announced by news releases dated November 8, 2018 and April 4, 2019. The QT involved the Company acquiring all of the outstanding shares of Minerva Intelligence (Canada) Ltd. from the former holders thereof, in exchange for shares of Two Owls. See "Amalgamation with Two Owls Ventures Corp." above.

---

***Liquidity and Capital Resources***

---

The Company's aggregate operating, investing and financing activities for the three-month period ended March 31, 2019 resulted in a cash decrease of \$754,646 (year ended December 31, 2018 a cash increase of \$5,421,057). As at March 31, 2019, the Company's cash balance was \$5,841,262 (December 31, 2018 \$6,595,908), and the Company had working capital of \$5,846,446 (December 31, 2018: \$6,574,235).

During the three-month period ended March 31, 2019, periods from incorporation on May 17, 2017 to December 31, 2017 and for the year ended December 31, 2018, the Company paid \$7,216 to acquire equipment (December 31, 2018 \$15,497).

During the year ended December 31, 2018, \$270,155 was recognized as capitalized expenses related to the development of intangible assets. There were no similar capitalized expenses in 2019.

During the three-month period ended March 31, 2019 the Company capitalized \$179,479 as a right to use asset with respect to its leased premises, and a lease liability of \$153,963. There were no comparable amount in 2018.

No other capital expenditures were incurred.

---

***Transactions with Related Parties***

---

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 periods ended December 31, 2018 and 2017 was as follows:

	<b>Three-month period ended</b>	<b>Year ended</b>
	<b>March 31, 2019</b>	<b>December 31, 2018</b>
Salaries and wages - expensed	\$ 34,909	\$ 94,455
Salaries and wages - capitalized	-	40,462
Professional fees - expensed	15,000	36,000
Share-based compensation	15,152	128,114
	<u>\$ 65,061</u>	<u>\$ 299,031</u>

Salaries and wages – capitalized consists of amounts capitalized to intangible asset development.

As at March 31, 2019 and December 31, 2018 accounts payable and accrued liabilities included:

- \$6,000 (December 31, 2018 - \$3,000) owing to David Poole, a director of the Company;
- \$5,130 (December 31, 2018 - \$5,130) owing to Newgrange Professional Corporation, a company controlled by Michael Campbell, a director of the Company for professional services;
- \$10,290 (December 31, 2018 - \$10,658) owing to Codeplan Consulting Corp., a company controlled by Chris Ahern, the Chief Operating Officer of the Company; and
- \$nil (December 31, 2018 - \$16,950) owing to Griffis International Ltd., a company controlled by Tom Griffis, the former Chairman of the Company.

Other related parties include companies controlled by key management personnel. The remuneration of other related parties during the periods ended March 31, 2019 and December 31, 2018 was as follows:

	<b>Three-month period ended March 31, 2019</b>	<b>Year ended December 31, 2018</b>
Salaries and wages - expensed	\$ -	\$ -
Professional fees - expensed	72,600	202,635
Professional fees – capitalized	-	52,044
General and administrative	-	-
	<u>\$ 72,600</u>	<u>\$ 254,679</u>

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

As at March 31, 2019 accounts payable and accrued liabilities included \$nil (December 31, 2018 - \$32,738) owing to other related parties. Amounts due to related parties, including amounts due to key management personnel, at December 31st 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 these 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 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 these financial statements include:

##### *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. The assets are not yet in use and therefore no amortization has been taken to date.

Judgments that have the most significant effect on the amounts recognized in these 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.

*Capitalization and expensing of R&D on intangible assets*

Intangible assets consist of costs incurred to acquire and develop the Company's software to earn revenue with respect to the Company's business operations. Development costs are capitalized in accordance with International Accounting Standard ("IAS") 38, Intangible Assets, and accordingly are recognized when the Company can demonstrate (i) the technical feasibility of completing the asset, (ii) the intention to complete and use or sell the asset, (iii) the ability to use or sell the asset, (iv) how the asset will generate probable future economic benefits, (v) the availability of adequate technical, financial and other resources to complete the platform development and to use or sell the asset, and (vi) ability to reliably measure the expenditure attributable to the asset during its development. Costs that do not meet these criteria are considered research costs and are expensed as incurred. Intangible assets are carried at cost less accumulated amortization and impairment losses, if any. The Company reviews the intangible assets for amortization and impairment each reporting period. During the year ended December 31, 2018 the Company commenced using the assets with its clients. Accordingly, the Company is now amortizing the software over its expected life of five years.

***Changes in Accounting Policies***

---

Except as described below, the accounting policies applied in these unaudited condensed interim financial statements are the same as those applied in the Company's annual audited financial statements for the year ended December 31, 2018. The reader is referred to those notes for a detailed discussion of the Company's accounting policies.

**IFRS 16 Leases**

Effective January 1, 2019, the Company adopted IFRS 16, Leases, which specifies how to recognize, measure, present and disclose leases. The standard introduces a single lessee accounting model and requires a lessee to recognize a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments.

The right-of-use asset is measured based on the initial amount of the lease liability adjusted for any initial direct costs incurred, less any lease incentives received. The right-of-use assets are subsequently amortized from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term using the straight-line method. The lease term includes consideration of an option to renew or to terminate if the Company is reasonably certain to exercise that option. In addition, the right-of-use asset may be periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Company's incremental borrowing rate. The lease liability is measured at amortized cost using the effective interest method. It is remeasured when there is a change in future lease payments arising mainly from a change in an index or rate, if there is a change in the Company's estimate of the amount expected to be payable under a residual value guarantee, or if the Company changes its assessment of whether it will exercise a purchase, renewal or termination option. When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

On October 16, 2018, the Company renewed the lease on its head office, consolidating two prior leases which were to expire on October 31, 2018 and January 31, 2019, respectively. On March 4, 2019 the Company added an addendum to the lease for another contiguous office space with an effective date of July 1, 2019.

For the purposes of IFRS 16, the Company determined, using a modified retrospective approach, that January 1, 2019 was the appropriate commencement date. The term of the lease is for 37 months from January 1, 2019. A discount rate of 5% was applied, being the interest rate specified in the lease for certain payments. Certain security deposits previously recorded as prepaid expenses were reclassified to the right-of-use asset. See Note 6.

Under IAS 17, Leases ("IAS 17"), the Company recognized its lease on its head office as an operating lease. Operating lease payments were recognized in net loss on a straight-line basis over the lease term. Lease incentives received were recognized as an integral part of the total lease expense, over the term of the lease.

The Company has adopted IFRS 9 (Financial Instruments) and IFRS 15 (Revenue from Contracts with Customers) in the 2018, however adoption did not have any impact on the financial statements for the period ended December 31, 2017 and 2018.

### ***Financial Instruments***

---

The Company is exposed to various financial risks resulting from its operations. The Company's management manages financial risks. The Company does not enter 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:

a) 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.

b) 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.

c) 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.

*i) 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 is not exposed to significant interest rate risk as cash only comprised bank balances as of March 31, 2019 and December 31, 2018. The Company had no interest rate swaps or financial contracts in place as at or during the periods ended March 31, 2019 and December 31, 2018.

*ii) 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, 2019, the Company held US cash of \$4,399,043 (December 31, 2018: \$4,804,051), converted to CAD at a rate of 1.3363 (December 31, 2018: 1.3642). A 10% change in the foreign exchange rate would have an impact on profit or loss of \$439,904 (December 31, 2018: \$480,405).

*iii) 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, 2019, the following table summarizes the outstanding share capital of the Company. As of the Report Date, the table summarizes the post Agreement share capital of Minerva:

	<b>March 31, 2019</b>	<b>Report Date</b>
Common Shares	7,715,001	42,675,005
Stock Options	390,000	2,260,000
	<hr/>	<hr/>
Total, Fully Diluted	<b>8,105,001</b>	<b>44,935,005</b>

Pursuant to the Agreement, the combined company of Two Owls and Minerva Canada (Minerva) has issued and outstanding: (i) 42,675,005 shares; (ii) 310,000 stock options exercisable at \$0.20 per share; (iii) 200,000 agent's options exercisable at \$0.20 per share; and (iv) 1,950,000 stock options exercisable at \$0.2534 per share.

A total of 12,766,675 common shares will be subject to escrow restrictions, including 1,100,000 originally issued to the Two Owls's principals upon listing the Company as a CPC, and 11,666,675 shares issued to new principals and others in connection with the QT. All escrowed shares will be released from escrow as to 10% on listing, and an additional 15% every six months thereafter over 36 months.

In addition (i) 3,416,665 shares are subject to resale restrictions over four months with 20% to be free trading on listing, with an additional 20% every month thereafter; and (ii) 5,166,665 shares will be subject to resale restrictions over 12 months with 20% to be free trading on listing, with an additional 20% every three months thereafter.

### ***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.

### **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.

### **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.

### **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.

#### **Share price volatility and liquidity**

There is no market for the Company's shares, and there is no assurance a market may be created for the Company's shares.

Should a market be established for the Company's shares, 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.

#### **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.

#### **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.

#### **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.