CARL DATA SOLUTIONS INC.

MANAGEMENT'S DISCUSSION & ANALYSIS
FOR THE THREE AND SIX MONTHS ENDED DECEMBER 31, 2021

General

This Management's Discussion and Analysis ("**MD&A**") of Carl Data Solutions Inc. (the "**Company**") is dated March 1, 2022 and provides a review of the Company's financial results, from the viewpoint of management, for the period ended December 31, 2021 ("**F2022-Q2**") compared to the year ended June 30, 2021 ("**F2021**").

The following information should be read in conjunction with the Company's audited consolidated financial statements with accompanying notes as at and for the year ended June 30, 2021 and the Company's condensed consolidated interim financial statements for the period ended December 31, 2021, which were prepared in accordance with International Financial Reporting Standards ("**IFRS**").

All dollar figures are expressed in Canadian dollars unless otherwise stated. These documents and additional information on the Company are available on the SEDAR website at www.sedar.com.

Cautionary Statement Regarding Forward-Looking Statements

Certain statements contained in this document constitute "forward-looking statements". When used in this document, the words "may", "would", "could", "will", "intend", "plan", "propose", "anticipate" and "believe", are intended to identify forward-looking statements. Such statements reflect the Company's "forecast", "estimate", "expectation" and similar expressions as they relate to the Company's current views with respect to future events and are subject to certain risks, uncertainties and assumptions.

The forward-looking statements contained in this MD&A are made as of the date hereof and represent the Company's views as of the date of this document. While the Company believes that the expectations reflected in the forward-looking statements and information contained herein are reasonable, no assurance can be given that these expectations, or the assumptions underlying these expectations, will prove to be correct. The Company acknowledges that subsequent events and developments may cause the views expressed herein to change, however, the Company has no intention and undertakes no obligation to update, revise or correct such forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable securities law. Therefore, there can be no assurance that forward-looking statements contained herein will prove to be accurate as actual results and future events could differ materially from those expected or estimated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.

Description of Business

Carl Data Solutions Inc. was incorporated under the *Business Corporations Act* (British Columbia) on January 17, 2014. The Company is an Industrial Internet of Things ("**IIoT**") and Big Data as a Service ("**BDaaS**") company that provides next-generation collection, storage and analytics solutions for data-centric organizations. Through its subsidiaries Astra Smart Systems Corp. and FlowWorks Inc., the Company helps clients analyze and model environmental data through a robust end-to-end network of custom sensor arrays combined with SaaS-based monitoring, reporting, and predictive modeling applications. The Company works with new cloud-based mass storage services and Artificial Intelligence ("**AI**") predictive analytics tools to provide the scalability required to effectively monitor vast amounts of data collected by both government and industrial customers. The Company's software solutions save customers time and money by aggregating information from any sensor or source to create decision support systems that offer deep insights into protecting infrastructure and assets with both real-time and AI-enabled predictive capabilities.

The Company is a public company that is listed on the Canadian Securities Exchange ("**CSE**") (under the symbol: CRL), the Frankfurt Stock Exchange (under the symbol: 7C5) and the OTCQB (under the symbol: CDTAF). The head office and principal address of the Company is located at Suite 488 – 1090 West Georgia Street, Vancouver, British Columbia, V6E 3V7. The Company's condensed consolidated interim financial statements include the financial statements of the following subsidiaries:

Company	Place of Incorporation	Effective Interest
Extend to Social Media Inc. ("**ETS**")	British Columbia	100%
FlowWorks Inc. ("**FlowWorks**")	Washington, USA	100%
Carl Data Solutions PL ("**Carl PL**")	Poland	100%
i4C Innovation Inc. ("**i4C**")	British Columbia	100%
Astra Smart Systems Corp. ("**Astra**")	British Columbia	100%

The Company has all the elements in place to successfully take on the Industrial Internet of things (IIoT) space as required for a wider variety of municipal and industrial infrastructure customers.

The Company can respond to the demands and visions of individual utilities within a municipal infrastructure environment delivering smart water and waste solutions that harness not only the world of IIoT sensors and on-site data loggers that are connected to the cloud, but also artificial intelligence algorithms and global predictive data to overlay future demands and imponderables such as weather fluctuations and product of service utilization.

These solutions have been adopted by numerous municipal and industrial infrastructure customers across the US and Canada and are performing well, collecting enormous data sets from IIoT sensors and a myriad of third-party end point devices.

With its proven analytics and AI capabilities, the Company is in a good position for strong growth in new vertical markets such as renewable energy utilities, ports, airports, transportation and smart cities.

Going Concern

The Company's condensed consolidated interim financial statements have been prepared on a going concern basis, which assumes that the Company will be able to meet its obligations and continue its operations for its next fiscal year. Realization values may be substantially different from carrying values as recorded in the audited consolidated financial statements. The Company's consolidated financial statements do not give effect to adjustments that would be necessary to the carrying values and classification of assets and liabilities should the Company be unable to continue as a going concern. As at December 31, 2021, the Company had not achieved profitable operations, had accumulated a deficit of $26,349,036 since inception and expects to incur further operating losses in the development of its business. The Company's ability to continue as a going concern is dependent upon the ability to develop its business units, develop marketable software, potentially find, acquire and develop various other business segments with growth potential, its ability to obtain the necessary financing to carry out this strategy and to meet its corporate overhead needs and discharge its liabilities as they come due. Although the Company has been successful in the past in obtaining financing, there is no assurance that it will be able to obtain adequate financing in the future or that such financing will be on terms advantageous to the Company. These events and conditions indicate a material uncertainty that may cast significant doubt about the Company's ability to continue as a going concern.

Recent Events & Overall Performance

Completed Private Placements and Share Issuances

During and subsequent to the period ended December 31, 2021, the Company did not complete any share transactions.

Granting of Stock options

During the period ended December 31, 2021, the shareholders of the Company adopted a stock option plan to replace the plan originally adopted on January 22, 2015. Under the terms of this plan, the total number of share purchase options to be granted and outstanding may not exceed 20% of the total issued and outstanding common shares of the Company at the date of grant. Options may be granted with an exercise price equal to the market price of the common shares less any permitted discount on the grant date, vest according to privileges set at the time the options, have a minimum price of $0.10 and are granted and expire no later than five years from the date of grant.

During and subsequent to the period ended December 31, 2021, the Company did not grant any stock options.

Organization structure changes

On July 19, 2021, Jean Charles Phaneuf, CEO of the Company since January 8, 2021, was appointed as a director of the Company, replacing David Gregory Johnston who resigned as a director but remains as President of the Company.

Summary of Quarterly Results

Key financial information for the quarters spanning the two most recent fiscal years is summarized as follows, reported in Canadian dollars:

	December 31, 2021	**September 30, 2021**	**June 30, 2021**	**March 31, 2021**
Revenue	$ 362,880	$ 380,970	$ 539,942	$ 603,676
Operating expenses	977,494	1,070,303	1,608,265	1,675,079
Loss for the period	(615,921)	(691,270)	(1,078,080)	(2,849,394)
Basic and Diluted Loss per share	(0.00)	(0.01)	(0.01)	(0.03)
Assets	2,666,572	3,363,557	4,187,057	4,886,611
Liabilities	973,606	1,094,351	1,406,296	1,437,218
Shareholders' Equity	1,692,966	2,269,206	2,780,761	3,449,393
	December 31, 2020	**September 30, 2020**	**June 30, 2020**	**March 31, 2020**
Revenue	$ 673,848	$ 813,874	$ 962,974	$ 631,531
Operating expenses	1,166,286	1,059,331	1,345,178	1,149,108
Loss for the period	(495,101)	(202,900)	(867,047)	(545,589)
Basic and Diluted Loss per share	(0.01)	(0.00)	(0.01)	(0.01)
Assets	1,766,391	1,782,913	2,857,168	3,546,572
Liabilities	3,192,805	3,079,685	3,963,057	4,405,091
Shareholders' Equity (Deficiency)	(1,426,414)	(1,296,772)	(1,105,889)	(858,519)

Discussion of Operations

Overview

Expenses for the six-month period ended December 31, 2021 of $2,047,797 were largely in line with the comparable period's operating expenditures of $2,225,617. Comparing the financial results and position for the period ended December 31, 2021 to the period ended December 31, 2020 reveals decreases in several non-cash items related to depreciation and amortization of assets and increases in several items related to the expansion of the number of employees and consultants that have been assembled to advance the Company's strategy utilizing the funds raised in the February 2021 unit private placement. Revenue decreased with the completion of the Canada's Digital Technology Supercluster (the "**Supercluster**") related to the Fresh Water Data Commons Project by $743,872 from $1,487,722 in the period ended December 31, 2021 to $743,850 in the period ended December 31, 2021. Cash on hand decreased by $1,349,599 from $2,903,056 on June 30, 2021 to $1,553,457 on December 31, 2021. Loans payable and convertible notes together increased by $7,443 from a total of $503,577 on June 30, 2021 to $511,020 on December 31, 2021. Total comprehensive loss for the period increased by $584,805 from $717,553 in the period ended December 31, 2020 to $1,302,358 in the period ended December 31, 2021 primarily due to lower revenue in the recent quarters. The cash used in operations increased by $396,090 from $875,067 used in the period ended December 31, 2020 to $1,271,157 used in the period ended December 31, 2021. Overall, shareholder equity decreased by $1,087,795 from $2,780,761 at June 30, 2021 to $1,692,966 at December 31, 2021.

Revenue

For the six-month period ended December 31, 2021, the Company generated $743,850 in revenues (2020 - $1,487,722) of which $608,301 (2020 - $671,535) related to revenue generated by FlowWorks, $69,049 related to revenue generated by the Company (2020 - $746,138), and $51,500 (2020 - $70,049) related to revenue generated by ETS. Revenue from FlowWorks is comprised of service fees from its web-based application used for data analysis in addition to set-up fees and custom programming service contracts. The Company commenced its work on a project with the Supercluster project during the latter half of the year ended June 30, 2020 and experienced continued growth of revenue as the project continued. The project reached a conclusion in October 2021.

Operating Expenses and Other Items

Operating expenses and other items with significant variances and balances include:

Amortization

Amortization for the period ended December 31, 2021 was $40,252 (2020 – $211,017). The amortization expense decreased substantially for the period ended December 31, 2021 as all but one of the Company's intangible assets were fully amortized as at June 30, 2021.

Computer Hosting Costs

Computer hosting costs for the period ended December 31, 2021 were $133,014 (2020 – $255,046) and decreased substantially with the completion of the Supercluster project. Remaining hosting costs are primarily for services provided by FlowWorks.

Consulting fees

Consulting fees for the period ended December 31, 2021 were $627,267 (2020 – $555,897). Consulting fees are primarily used for management and external sales and business development consultants tasked with advancing the Company's strategy utilizing funds raised in the February 11, 2021 private placement.

Depreciation

Depreciation for the period ended December 31, 2021 was $71,785 (2020 – $130,400) and decreased as a result of the termination of i4C's lease and therefore a reduction in right of use assets as compared to the first quarter of the fiscal year ended June 30, 2021.

Interest

Interest for the period ended December 31, 2021 was $7,190 (2020 – $83,860). Interest is charged on convertible notes and loans payable and decreased as the Company settled most of its outstanding loans and convertible debt during the third quarter of the year ended June 30, 2021.

Investor Relations

Investor relations expense for the period ended December 31, 2021 were $48,940 (2020 – $216,400). Investor relations fees have been comparatively low in preparation of future marketing and public relations expenditure targeted at upcoming product launches.

Office and miscellaneous

Office and miscellaneous costs for the period ended December 31, 2021 were $112,030 (2020 – $57,650). The costs increased substantially with the hiring of several new staff and consultants to carry out the Company's operational strategy.

Professional fees

Professional fees for the period ended December 31, 2021 were $156,345 (2020 – $137,972). Professional fees were higher than the prior year as the Company undertook legal work to help with the expansion of the management team.

Share-based payments

Share-based payments for the period ended December 31, 2021 were $214,563 (2020 – $50,324). The expense relates primarily to stock options granted and vested during previous periods and are not expected to be comparable over the periods as the expense is dependent on the timing of grants and vesting schedules.

Salaries and wages

Salaries and wages for the period ended December 31, 2021 were $462,712 (2020 – $404,013). The increase in salaries and wages, as with consulting above, is primarily a result of the expansion of the Company's team to advance the Company's strategy.

Travel

Travel expenses for the period ended December 31, 2021 were $68,880 (2020 – $16,270). Travel increased from the previous year due to several executives visiting the Company's head office in Vancouver from their residences across Canada and for limited in-person sales meetings and tradeshows within North America.

Operating Activities and Plans

Company Structure

The Company has complementary operations based in Vancouver (Canada), Seattle (USA) and Gdansk (Poland).

1) Software application development, hardware research and development and the management team is led out of offices at the Company's Vancouver, British Columbia headquarters at 1090 West Georgia Street.
2) The Company also maintains an address in Seattle, Washington in support of its US sales team.
3) Data science developers with the data science expertise required by the Company are located in Gdansk, Poland.

Moving Forward

The Company currently targets customers in municipal and industrial infrastructure verticals through engineering project integration firms that require an innovation edge. These partners and their customers count on the Company to collect, cleanse, organize, store and analyze time-series data in mission-critical applications like water treatment and air quality. Mastering time-series data not only avoids costly downtime in large-scale infrastructure operations, but also allows customers to take advantage of predictive and prescriptive analytics on processes or forecast events to optimize outcomes and mitigate risks.

The Company's 2021 completion of the Canada's Digital Technology Supercluster project is bringing significant intellectual property into the Company. Technology developed includes AI-enabled software and hardware sensors. These innovations are being leveraged to create new Environmental Monitoring as a Service ("**EMaaS**") products for infrastructure organizations seeking to minimize energy and water use, manage waste and land safely, and ensure comprehensive compliance for emerging Environmental Social and Governance (ESG) mandates.

At its Annual General and Special Meeting of shareholders on November 24, 2021, the Company announced that new products will be launched commercially over the course of 2022. They are:

EMaaS: EMaaS is the Company's most advanced technology platform required by Smart City and industrial applications desiring the foresight of predictive analytics to protect compliance-driven infrastructure operations.

Driven by time-series data that is essential to understanding statistical anomalies, the EMaaS solution will be deployed to monitor environmental changes that affect critical infrastructure. EMaaS fuses on-site sensor-driven data with a myriad of third-party atmospheric, seismic and geographic data streams.

Auto QA/QC: Auto QA/QC is the Company's latest Machine Learning ("**ML**") technology for automatically cleaning and performing Quality Assurance ("**QA**") and Quality Control ("**QC**") on time-series data derived from sensors.

The automation aspect of Auto QA/QC detects and prevents bad sensor data from generating results or triggering alerts. At the same time, Auto QA/QC flags legitimate data anomalies that may require further investigation by infrastructure engineers.

Auto I&I: Auto I&I is the Company's newest technology for Inflow & Infiltration ("**I&I**") required by municipal water treatment plants. Auto I&I detects storm events that match defined rainfall criteria.

Auto I&I also capitalizes on Auto QA/QC to prevent bad sensor data from distorting results. By automating I&I data gathering and reports, municipal water treatment engineers will quickly see which areas of their systems are most impacted by a storm event and visualize real-time I&I metrics on a Geographic Information System ("**GIS**") map.

The Company announced a strategic partnership agreement with Montreal-based K2 Geospatial ("**K2**") to target new customers in municipal, regional and national infrastructure verticals on February 23, 2022. The execution of this agreement will formalize the integration of Carl Data Solutions' latest generation of EMaaS technology with K2's agnostic and scalable mapping platform called JMap. This will make it possible for K2 users to collect time series data from multiple sources via IIoT sensors, cleanse and analyze data and perform AI-driven predictive analytics using ML algorithms. In addition, the integration of technologies will allow users of Carl Data Solutions applications to access K2's JMap spatial analysis mapping integration platform.

The agreement stipulates that K2 will pay a 15% finders fee to the Company for any sales of K2's software licenses found by the Company and either company will pay a 5% finders fee to the other for leads on SaaS-based services.

K2 Geospatial's customer base includes 500 organizations, including more than 350 cities and municipalities, seaports, airports, road authorities and utilities across North America and Europe. K2 users rely on JMap to provide executives, GIS analysts and non-technical users with the ability to collaborate, analyze, decide and act in real time. As with both companies' technologies, K2's customer base has zero overlap with Carl Data Solutions, creating high-potential business development synergies.

Liquidity and Capital Resources

During the period ended December 31, 2021, the Company's operating activities required cash of $1,271,157 (2020 - $875,067). The Company's cash as at December 31, 2021 was $1,553,457 (June 30, 2021 - $2,903,056) and the Company's working capital was $1,526,110 (June 30, 2021 - $2,523,569).

Financing Activities

During the period ended December 31, 2021, the Company used net cash flows of $79,318 on financing activities (2020 - inflows of $914,902). The Company's outflow included $53,848 (2020 - $66,888) in payments toward lease liabilities and $25,470 (2020 - nil) in payments toward loans payable. During the comparative period ended December 31, 2020, the Company had cash inflows of $736,264 from common share issuances and $330,000 from loans and convertible notes issued, less outflows of $21,807 to repurchase common shares and $62,667 in repayment of convertible notes.

Investing Activities

The Company did not have any investing activities for the periods ended December 31, 2021. During the period ended December 31, 2020, the Company generated $6,410 in investing activities on the acquisition of i4C.

Capital Structure

As at the date of this MD&A, the Company has 126,424,783 common shares, 37,341,920 warrants, and 9,887,247 stock options outstanding.

Financial Instruments and Risk Management

Fair value of financial instruments

The Company measures the fair value of its financial instruments according to a fair value hierarchy based on the significance of observable inputs used to value the instrument as follows:

- Level 1 – Quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
- Level 2 – Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3 – Unobservable inputs for the asset or liability.

The Company's financial instruments consisting of accounts and other receivables, accounts payable and accrued liabilities, loans payable, and convertible notes are classified at amortized cost. The carrying values of these financial instruments approximate their fair values because of their relatively short maturity dates or durations and/or attached market rates of interest.

Cash is classified as being at FVTPL. The fair value of cash as recorded in the condensed consolidated interim statements of financial position is measured in accordance with Level 1 of the fair value hierarchy.

Financial and capital risk management

The Company examines the various financial instruments and risks to which it is exposed and assesses the impact and likelihood of those risks. These risks include market risk, foreign currency risk, interest rate risk, credit risk, and liquidity risk. These risks are reviewed and monitored by the Board of Directors.

The Board of Directors has overall responsibility for the determination of the Company's risk management objectives and policies. The overall objective of the Board is to set policies that seek to reduce risk as far as possible without unduly affecting the Company's competitiveness and flexibility. Discussions of risks associated with financial assets and liabilities are detailed below:

Market Risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices will affect the fair value or future cash flows of a financial instrument. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return. As at December 31, 2021 and June 30, 2021, the Company was not subject to significant market risk.

Foreign currency risk

As at December 31, 2021, the Canadian dollar equivalent carrying values of the financial assets and liabilities denominated in foreign balances are as follows:

	US Dollars		**Polish Zloty**	
December 31,	**2021**	**2020**	**2021**	**2020**
Financial Assets				
Cash	$ 65,614	$ 20,561	$ 27,656	$ 25,614
Accounts receivable	284,132	273,535	-	-
Financial Liabilities				
Accounts payable and accrued liabilities	$ 92,188	$ 67,650	$ 38,032	$ 35,995

The Company's subsidiary, FlowWorks, operates in the United States which, from the perspective of the Company, creates currency risk associated with those operations. For the period ended December 31, 2021, FlowWorks had revenue of $608,301 (2020 - $671,535) (Canadian dollar equivalent). A 10% change in the foreign exchange rate would result in a $61,000 (2020 - $67,000) (Canadian dollar equivalent) change in profit or loss.

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's interest rate risk mainly arises from changes in the interest rates on cash. Cash generates interest based on market interest rates. As at December 31, 2021 and June 30, 2021, the Company was subject to interest rate risk with respect to its loans payable, some of which bear interest at a fixed rate, some at a variable rate and others are non-interest bearing, and convertible notes, which bear interest at a fixed rate.

Credit Risk

Credit risk arises from the non-performance by counterparties of contractual financial obligations. The Company's maximum exposure to credit risk at the reporting date is the carrying value of cash and accounts and other receivables. The Company holds cash at a major Canadian chartered bank in chequing accounts, at a Washington State, USA bank and at a Polish bank.

The Company is exposed to credit risk on its trade accounts receivable. The Company's credit risk for accounts receivable is concentrated as 55% of its trades account receivable is owing from four customers (June 30, 2021 - 58% from four customers), with more than 10% owing from one of those customers (June 30, 2021 - one).

The Company applies the simplified approach to providing for expected credit losses prescribed by IFRS 9, which permits the use of the lifetime expected loss provision for all trade receivables. To measure the expected credit losses, trade receivables are assessed primarily based on days past due and adjusted for current credit information. The Company has assessed expected credit losses based on 20% of its trade accounts receivables aged past 90 days and has estimated expected credit losses as at December 31, 2021 of $9,677 (June 30, 2021 - $15,079).

Liquidity Risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset. The Company manages liquidity risk by maintaining adequate cash balances. If necessary, the Company may raise funds through the issuance of debt, equity or sale of non-core assets. The Company ensures that there is sufficient capital to meet its obligations by continuously monitoring and reviewing actual and forecasted cash flows and matching the maturity profile of financial assets to development, capital and operating needs. The Company's accounts payable are due within 30 to 60 days. The Company has adequate working capital as at December 31, 2021 and raise financing to meet its financial obligations in the future as required.

Off-Balance Sheet Arrangements

The Company has no off-balance sheet arrangements.

Related Party Transactions

On January 2, 2021, the Company entered into an executive consulting agreement for services related to acting as CEO of the Company with a company controlled by the CEO of the Company. Under the terms of the agreement, the Company pays monthly consulting fees of $15,000 ($180,000 annually). The agreement has no fixed terms and includes a termination benefit equal to twelve months of pay.

On July 1, 2020, the Company amended a previous executive consulting agreement with the CFO of the Company whereby Company pays monthly consulting fees of $10,000 ($120,000 annually). The agreement has no fixed terms and includes a termination benefit equal to six months of pay or twelve months if termination is due to a change of control.

Company had previously entered into an executive consulting agreement for services related to acting as President of the Company, with a company controlled by the President, former CEO, and director of the Company. Under the terms of the agreement, the Company paid that company a total of $11,667 per month. Effective July 1, 2019, the Company replaced this agreement with a new agreement whereby the Company will pay monthly consulting fees of $13,333 ($159,996 annually). The new agreement has no fixed terms and includes a termination benefit equal to twelve months of pay.

Key management personnel are those persons having the authority and responsibility for planning, directing, and controlling activities of the entity, directly or indirectly. The key management personnel of the Company are the members of the Company's executive management team and Board of Directors. During the period ended December 31, 2021, the Company paid or accrued, to key management personnel and their related companies:

During the period ended December 31, 2021, the Company paid or accrued, to key management personnel and their related companies:

	Consulting Fees	Share-based payments	Total
Jean Charles Phaneuf, CEO	$ 90,000(1)	$ 140,001	$ 230,001
Cale Thomas, CFO	60,000	-	60,000
Greg Johnston, President	80,000(2)	-	80,000
Total	$ 230,000	$ 140,001	$ 370,001

(1) comprised of fees plus paid to 9299-5257 Quebec Inc., a company wholly owned by Jean Charles Phaneuf.
(2) Comprised of fees paid to BDirect Online Communications, a company wholly owned by Greg Johnston.

During the period ended December 31, 2020, the Company paid or accrued, to key management personnel and their related companies:

	Consulting Fees	Share-based payments	Total
Greg Johnston, President and Former CEO	$ 80,000	$ -	$ 80,000
Cale Thomas, CFO	60,000	24,429	84,429
Non-executive Directors	18,000	24,429	42,429
Total	$ 158,000	$ 48,858	$ 206,858

Included in accounts payable and accrued liabilities as at December 31, 2021 is $7,715 (June 30, 2021 - $172,529) due to officers and directors and their related organizations. During the year ended June 30, 2021, the Company settled an aggregate $91,815 in accounts payable and accrued liabilities to an officer and a director through the issuance of 642,100 common shares valued at $126,998. The Company recognized a loss on debt settlement of $35,183.

On June 9, 2014, ETS signed a referral services agreement with RA Revenue Automation Inc. ("RA") whereby RA agreed to use ETS as its exclusive referral marketing application and include the concept in all relevant business development pitches to customers. A company controlled by the Company's President owns 10% of RA. Social referral software revenue of $51,500 (2020 - $48,300) recorded in profit or loss is from RA for the period ended December 31, 2021. As at December 31, 2021, $28,718 (June 30, 2021 - $33,810) was owed from RA.

Kerr Wood Leidal Associates Ltd. ("KWL")

KWL, a consulting engineering company, founded and created FlowWorks and is related through a director of the Company. During the period ended December 31, 2021, the Company earned data services revenue from KWL of $98,725 (2020 - $74,675) and incurred expenses from KWL of $4,512 (2020 - $36,672), which are recorded in office and miscellaneous, and consulting expenses. Included in accounts receivable as at December 31, 2021 is a balance owing from KWL of $17,862 (June 30, 2021 - $45,221). Included in accounts payable and accrued liabilities as at December 31, 2021 is a balance owing to KWL of $nil (June 30, 2021 - $47,250).

Proposed Transactions

There are no proposed transactions for the period ended December 31, 2021 outside of those identified in this document.

Subsequent Events

There were no subsequent events for the period ended December 31, 2021.

Critical Accounting Estimates

The effect of a change in an accounting estimate is recognized prospectively by including it in profit or loss in the period of the change, if the change affects that year only, or in the year of the change and future years, if the change affects both.

Valuation of acquired assets

The Company has made estimates with respect to the acquisition date fair values of the identifiable assets and liabilities of acquired businesses. The valuation of intangible assets requires management to use valuation techniques to assess the fair values of assets and liabilities acquired at acquisition date, and each subsequent reporting period end date. The Company used its judgment to select methods and makes assumptions that reflected market conditions as at these dates.

Equity-settled transactions

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. Equity-settled transactions with non-employees are recorded at the fair value of the service provided, where this is readily determinable. In other instances, they are recorded at the fair value of the equity instruments issued. 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 share-based award, volatility and dividend yield and making assumptions about them.

New standards and interpretations adopted

There were no new standards or interpretations adopted during the period ended December 31, 2021.

Future Changes in Accounting Policies

There are no IFRSs or IFRIC interpretations that are not yet effective that would be expected to have a material impact on the Company.

Risk Factors

The following are major risk factors management has identified which relate to the Company's business activities. Such risk factors could materially affect the Company's future financial results and could cause events to differ materially from those described in forward-looking statements relating to the Company. Though the following are major risk factors identified by management, they do not comprise a definitive list of all risk factors related to the Company's business and operations. Other specific risk factors are discussed elsewhere in this MD&A.

Capitalization and Commercial Viability

The Company will require additional funds to continue operations. The Company has limited financial resources, and there is no assurance that additional funding will be available to the Company to carry out the completion of all proposed activities. There can be no assurance that the Company will be able to obtain adequate financing in the future or that the terms of such financing will be favourable. Failure to obtain such additional financing could result in the curtailment of operations, liquidation of assets, seeking of additional capital on less favourable terms and/or other remedial measures.

History of Operating Losses

The Company has an accumulated deficit since its incorporation through December 31, 2021 of $26,349,036. The deficit may increase in the near term as the Company continues its product development and establishes sales channels for its new products.

General Economic Conditions

The Company currently operates in Canada, the United States and Poland and, like all global businesses, it has been subject to the impact of the current global credit and financial crisis on consumers in its areas of operations and the discretionary spending available to them. General economic conditions have resulted in reduced consumer and government spending and have impacted the Company's profitability. Should these conditions continue to prevail, there will be further pressure on the Company's profitability.

COVID-19 Pandemic

In March 2020, the World Health Organization declared coronavirus COVID-19 a global pandemic. This contagious disease outbreak, which has continued to spread, and any related adverse public health developments, has adversely affected workforces, economies and financial markets globally, potentially leading to an economic downturn. Currently, it is not possible for the Company to predict the duration or magnitude of the adverse results of the outbreak and its effects on the Company's business or ability to raise funds.

Key Employees

The success of the Company, like all marketing and software companies, is largely dependent on the performance of its key employees and directors. The failure to retain key employees and directors and to attract and retain additional key employees with necessary skills could have a material adverse impact upon the Company's growth and profitability. Competition for highly skilled management, technical and other employees is intense. There can be no assurance that the Company will be successful in attracting and retaining such personnel and the departure of any of the members of the Company's executive team or key directors could have a material adverse effect on the Company's business, results of operations and financial condition.

New Market Risk

The Company is operating in a large market but is providing previously unavailable services. The Company faces uncertainty as to the degree of new and continuing market acceptance of its products. The performance of the Company also depends on the performance of agencies that the Company partners with along with their end customers.

Customer Risks

The Company is dependent on proper pricing of products and services, the ability to provide insights to customers based on their collected data, reporting of successful results of referral campaigns and timely collection of customer accounts. The Company is also dependent on its ability to ensure that their customers operate within the terms of its service agreements.

Intellectual Property Risks

The Company has taken steps to protect its proprietary technology. The Company relies on a combination of trademark, trade secrets, laws and other intellectual property protection methods to protect its proprietary technology. These steps may not completely protect the Company's proprietary technology, nor give it a competitive edge. Others may independently develop substantially equivalent technology or gain access to our trade secrets. If the Company is unable to protect its intellectual property, the business over time could be materially affected. The Company will pursue all avenues available to it, if necessary, to enforce its patents, and to protect its trademarks and other intellectual property rights owned by the Company.

Reliance on Information Systems and Technology

The Company's business relies upon information technology systems to service customers at the point of sale. Its information technology systems may be vulnerable to unauthorized access, computer viruses, system failures, other malicious acts or acts of nature. Should a significant disruption to its information technology occur, the Company's earnings could be adversely affected through loss of revenue and the costs to rectify the disruption. The Company is in an industry with many competitors that lay claim to intellectual property. The Company may receive notice from a third party asserting the Company has infringed on their intellectual property rights. As a result of such claims the Company's earnings could be adversely affected by costly litigation, product injunctions or consumption of management attention. The Company may also be required to expend significant capital and resources to protect against the threat of security, encryption and authentication technology breaches or to alleviate problems caused by such breaches.

Reliance on Third Party Licenses

The Company relies on certain software that it licenses from third parties, including a software program that is integrated with internally developed software and used in the Company's products to perform key functions. There can be no assurance that these third-party licenses will continue to be available to the Company on commercially reasonable terms. The loss of, or inability to maintain, any of these licenses, could result in delays or reductions in product and service deployment until equivalent software can be developed, identified, licensed and integrated, which could materially adversely affect the Company's business, results of operations and financial condition.

Risk Associated with International Operations

Management of the Company believes that its continued growth and profitability will require expansion of its sales further in the United States and into other foreign markets. This expansion will require significant management attention and financial resources and could adversely affect the Company's operating margins. In order to increase international sales in subsequent periods, the Company may establish additional foreign operations, incur substantial infrastructure costs, hire additional personnel and recruit international resellers. To the extent that the Company is unable to expand international sales in a timely and cost-effective manner, the Company's business, results of operations and financial condition could be materially adversely affected. In addition, even with the possible recruitment of additional personnel and international partners, there can be no assurance that the Company will be successful in maintaining or increasing international market demand for the Company's applications and services. The risk associated with currency fluctuations are comprised mainly of the Company's United States denominated sales, component purchases and other expenses. In the future, it is expected that a portion of revenues may be realized in other foreign currencies as a result of international sales. Fluctuations in the exchange rate between the Canadian dollar and other currencies, particularly the United States dollar, may have a material adverse effect on the Company's results of operations, financial condition and any business prospects. The Company may use hedges to mitigate the risk of foreign currency exposure.

Expansion

The success of the Company's continued expansion will depend upon many factors, including the ability of the Company to maintain acceptable attrition rates and control of operating costs. There can be no assurance that the Company will be able to grow or achieve its continued expansion. Such risks, if they materialize, could have a material adverse effect on the Company's business, financial condition, liquidity and results of operations.

Available Workforce

The Company's continued success will depend on the performance and continued service of the Company's employees. The Company relies on the ability to attract new software engineers and developers, research and development staff, production personnel and key sales and marketing employees. The Company will continue to develop our employees and search for key new hires, however there is no assurance that the Company will be able to retain existing personnel or attract, hire and retain additional qualified personnel.