FORM 5

QUARTERLY LISTING STATEMENT

Name of Listed Issuer: <u>Carl Data Solutions Inc.</u> (the ñIssuerò)

Trading Symbol: <u>CRL</u>

This Quarterly Listing Statement must be posted on or before the day on which the Issuerõs unaudited interim financial statements are to be filed under the *Securities* Act, or, if no interim statements are required to be filed for the quarter, within 60 days of the end of the Issuerõs first, second and third fiscal quarters. This statement is not intended to replace the Issuerõs obligation to separately report material information forthwith upon the information becoming known to management or to post the forms required by the Exchange Policies. If material information became known and was reported during the preceding quarter to which this statement relates, management is encouraged to also make reference in this statement to the material information, the news release date and the posting date on the Exchange website.

General Instructions

(a) Prepare this Quarterly Listing Statement using the format set out below. The sequence of questions must not be altered nor should questions be omitted or left unanswered. The answers to the following items must be in narrative form. When the answer to any item is negative or not applicable to the Issuer, state it in a sentence. The title to each item must precede the answer.

(b) The term ñIssuerò includes the Listed Issuer and any of its subsidiaries.

(c) Terms used and not defined in this form are defined or interpreted in Policy 1 ï Interpretation and General Provisions.

There are three schedules which must be attached to this report as follows:

SCHEDULE A: FINANCIAL STATEMENTS

Financial statements are required as follows:

For the first, second and third financial quarters interim financial statements prepared in accordance with the requirements under Ontario securities law must be attached.

If the Issuer is exempt from filing certain interim financial statements, give the date of the exempting order.

<u>See the Issuerõs financial statements for the periods ended March 31, 2019 and 2018, attached hereto as Schedule A.</u>

SCHEDULE B: SUPPLEMENTARY INFORMATION

The supplementary information set out below must be provided when not included in Schedule A.

1. Related party transactions

Provide disclosure of all transactions with a Related Person, including those previously disclosed on Form 10. Include in the disclosure the following information about the transactions with Related Persons:

(a) A description of the relationship between the transacting parties. Be as precise as possible in this description of the relationship. Terms such as affiliate, associate or related company without further clarifying details are not sufficient.

(b) A description of the transaction(s), including those for which no amount has been recorded.

(c) The recorded amount of the transactions classified by financial statement category.

(d) The amounts due to or from Related Persons and the terms and conditions relating thereto.

(e) Contractual obligations with Related Persons, separate from other contractual obligations.

(f) Contingencies involving Related Persons, separate from other contingencies.

All related party transactions have been disclosed in the Issuer's financial statements for the periods ended March 31, 2019 and 2018, attached hereto as Schedule A.

2. Summary of securities issued and options granted during the period

Provide the following information for the period beginning on the date of the last Listing Statement (Form 2A):

(a) summary of securities issued during the period,

Date of Issue	Type of Security (common shares, convertible debentures, etc.)	Type of Issue (private placement, public offering, exercise of warrants, etc.)	Number	Price	Total Proceeds	Type of Consideration (cash, property, etc.)	Describe relationship of Person with Issuer (indicate if Related Person)	Commission Paid
October 22, 2018	Common shares	Settlement of outstanding debt	330,000	$0.105 per share	$34,650	Conversion of debt	Related Person	None
October 22, 2018	Common shares	Settlement of outstanding debt	214,285	$0.105 per share	$22,500	Conversion of debt	Reporting Insider	None
November 30, 2018	Common shares	Asset Acquisition	400,000	$0.485 per share	$194,000	Equipment Assets	Arm's-length	None
February 20, 2019	Common shares	Settlement of outstanding debt	210,000	$0.11 per share	$31,500	Conversion of debt	Related Person	None

(b) summary of options granted during the period,

Date	Number	Name of Optionee if Related Person and relationship	Generic description of other Optionees	Exercise Price	Expiry Date	Market Price on date of Grant
October 15, 2018	150,000	Chris Johnston, director		$0.14	October 14, 2022	$0.14
October 15, 2018	150,000	Rick Sanderson, director		$0.14	October 14, 2022	$0.14
October 15, 2018	150,000	Craig Tennock, director		$0.14	October 14, 2022	$0.14
October 15, 2018	367,247	Kevin Ma, director		$0.14	October 14, 2022	$0.14
October 15, 2018	250,000	Julie McClure, director		$0.14	October 14, 2022	$0.14
October 15, 2018	1,000,000	David Johnston, President, CEO & director		$0.14	October 14, 2022	$0.14
October 15, 2018	310,000		Various Consultants	$0.14	October 14, 2022	$0.14

October 15, 2018	1,618,000		Various Employees	$0.14	October 14, 2022	$0.14

3. Summary of securities as at the end of the reporting period at the end of the reporting period

Provide the following information in tabular format as at the end of the reporting period:

(a) description of authorized share capital including number of shares for each class, dividend rates on preferred shares and whether or not cumulative, redemption and conversion provisions,

See the Issuer's financial statements for the periods ended March 31, 2019 and 2018, attached hereto as Schedule A

(b) number and recorded value for shares issued and outstanding,

(c) See the Issuer's financial statements for the periods ended March 31, 2019 and 2018, attached hereto as Schedule A

(d) description of options, warrants and convertible securities outstanding, including number or amount, exercise or conversion price and expiry date, and any recorded value, and

(e) See the Issuer's financial statements for the periods ended March 31, 2019 and 2018, attached hereto as Schedule A

(f) number of shares in each class of shares subject to escrow or pooling agreements or any other restriction on transfer.

- A summary of securities is included in the Issuer's financial statements for the periods ended March 31, 2019 and 2018, attached hereto as Schedule A.
- Of the 76,771,398 common shares of the Issuer that were issued and outstanding as at March 31, 2019,
  - 186,228 were subject to an escrow agreement dated June 26, 2017.

4. List the names of the directors and officers, with an indication of the position(s) held, as at the date this report is signed and filed

Name	Position(s) Held
D. Gregory Johnston	President, Chief Executive Officer, Director
Cale Thomas	Chief Financial Officer
Kevin Ma	Director
Chris Johnston	Director
Rick Sanderson	Director
Craig Tennock	Director
Julie McClure	Director

SCHEDULE C: MANAGEMENT DISCUSSION AND ANALYSIS

Provide Interim MD&A if required by applicable securities legislation.

See the Issuerǿs management discussion and analysis for the periods ended March 31, 2019 and 2018, attached hereto as Schedule C.

Certificate Of Compliance

The undersigned hereby certifies that:

1. The undersigned is a director and/or senior officer of the Issuer and has been duly authorized by a resolution of the board of directors of the Issuer to sign this Quarterly Listing Statement.

2. As of the date hereof there is no material information concerning the Issuer which has not been publicly disclosed.

3. The undersigned hereby certifies to the Exchange that the Issuer is in compliance with the requirements of applicable securities legislation (as such term is defined in National Instrument 14-101) and all Exchange Requirements (as defined in CNSX Policy 1).

4. All of the information in this Form 5 Quarterly Listing Statement is true.

Dated May 30, 2019.

Cale Thomas
Name of Director or Senior Officer

"Cale Thomas"
Signature

CFO
Official Capacity

Name of Issuer Carl Data Solutions Inc.	For Quarter Ended March 31, 2019	Date of Report May 30, 2019
Issuer Address Suite 488 ï 1090 West Georgia Street		
City/Province/Postal Code Vancouver, BC V6E 3V7	Issuer Fax No. N/A	Issuer Telephone No. (778) 379-0275
Contact Name Cale Thomas	Contact Position CFO	Contact Telephone No. (604) 209-0034
Contact Email Address cale@carlsolutions.com	Web Site Address www.carlsolutions.com	

SCHEDULE A

FINANCIAL STATEMENTS

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CARL DATA SOLUTIONS INC.

CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS
FOR THE THREE AND NINE MONTHS ENDED MARCH 31, 2019

(UNAUDITED)
(Expressed in Canadian Dollars)

CONTENTS

MANAGEMENT’S COMMENTS ON
UNAUDITED CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS

NOTICE OF NO AUDITOR REVIEW OF CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS

Under National Instrument 51-102, Part 4, subsection 4.3(3)(a), if an auditor has not performed a review of the unaudited condensed interim financial statements; they must be accompanied by a notice indicating that the financial statements have not been reviewed by an auditor.

The accompanying unaudited condensed consolidated interim financial statements of Carl Data Solutions Inc. (the ñCompanyò) have been prepared by and are the responsibility of the Companyôs management. The unaudited condensed consolidated interim financial statements are prepared in accordance with International Financial Reporting Standards and reflect managementôs best estimates and judgment based on information currently available.

The Companyôs independent auditor, Baker Tilly WM LLP, has not performed a review of these condensed consolidated interim financial statements in accordance with standards established by the Chartered Professional Accountants of Canada for a review of the condensed consolidated interim financial statements by an entityôs auditor.

CARL DATA SOLUTIONS INC.
CONDENSED CONSOLIDATED INTERIM STATEMENTS OF FINANCIAL POSITION
Presented in Canadian Dollars - unaudited

As at		**March 31, 2019**		**June 30, 2018**
ASSETS				
Current Assets				
Cash	$	97,122	$	247,795
Accounts and other receivables (note 9)		289,905		432,408
Digital currencies (note 10)		9,127		8,244
Prepaid expenses		422,265		434,767
		818,419		1,123,214
Non-Current Assets				
Intangible assets (notes 7, 8 and 12)		1,869,829		2,442,044
Property and equipment (notes 7, 8 and 11)		576,641		701,571
Goodwill		118,775		118,775
Total Assets	$	3,383,664	$	4,385,604
LIABILITIES AND SHAREHOLDERS' EQUITY				
Current Liabilities				
Accounts payable and accrued liabilities (note 13)	$	763,322	$	373,015
Current portion of convertible notes (note 15)		688,171		-
Loans payable (note 14)		309,292		604,000
		1,760,785		977,015
Loans payable (note 14)		225,000		-
Convertible notes (note 15)		-		10,000
Total Liabilities		1,985,785		987,015
Shareholders' Equity (note 16)				
Share capital		15,836,416		15,638,336
Reserves		1,555,413		1,293,509
Equity conversion feature on convertible note (note 15)		95,858		1,477
Commitment to issue shares (notes 7 and 14)		10,000		113,211
Accumulated other comprehensive income		46,059		41,663
Deficit		(16,145,867)		(13,689,607)
		1,397,879		3,398,589
Total Liabilities and Shareholders' Equity	$	3,383,664	$	4,385,604

Nature of Operations and Going Concern (note 1)
Commitments (note 22)
Subsequent Events (note 25)

APPROVED ON BEHALF OF THE BOARD ON MAY 30, 2019

"Kevin Ma"	*"Chris Johnston"*
Director	**Director**

The accompanying notes are an integral part of these condensed consolidated interim financial statements.

CARL DATA SOLUTIONS INC.
CONDENSED CONSOLIDATED INTERIM STATEMENTS OF LOSS AND COMPREHENSIVE LOSS
Presented in Canadian Dollars - unaudited

	Three months ended March 31, 2019	Three months ended March 31, 2018	Nine months ended March 31, 2019	Nine months ended March 31, 2018
Revenue				
Data services	$ 256,885	$ 216,628	$ 763,664	$ 664,811
Data hosting	-	-	351,580	-
Digital currency verification services	10,877	-	18,660	-
Custom programming service contracts	42,889	40,030	45,129	156,152
Social referral software	24,150	24,150	72,450	72,450
	334,801	280,808	1,251,483	893,413
Expenses				
Accretion of convertible note (note 15)	40,504	26,575	42,552	61,534
Amortization (note 12)	177,169	70,342	574,791	199,799
Bad debt (recovery) (notes 9 and 23)	5,441	-	8,642	-
Computer hosting costs	71,676	76,920	247,417	211,198
Consulting	150,057	92,166	726,532	585,862
Depreciation (note 11)	58,555	8,440	166,267	11,347
Energy costs	23,232	-	204,793	-
Filing and transfer agent	7,299	42,788	17,835	64,017
Foreign exchange loss	5,608	27,199	5,133	38,518
Interest and penalties (note 14)	11,821	17,847	70,407	69,158
Investor relations	21,045	77,162	93,808	1,925,513
Marketing	37,674	36,725	82,052	57,951
Occupancy	41,817	33,616	137,656	115,625
Office and miscellaneous	32,754	44,201	130,742	126,145
Professional fees	45,803	78,080	183,552	214,024
Share-based payments (note 18)	53,293	26,164	261,904	108,006
Salaries and wages	253,362	284,183	636,397	730,030
Travel	17,593	39,364	76,035	121,113
	(1,054,703)	(981,772)	(3,666,515)	(4,639,840)
Operating Loss	(719,902)	(700,964)	(2,415,032)	(3,746,427)
Other expenses				
Financing costs (note 14)	-	-	(45,000)	(292,028)
Revaluation of digital currencies	5,035	-	(838)	-
Realized gain on sale of digital currencies	-	-	2,303	-
Digital currency written off	(11,943)	-	(11,943)	-
Gain (loss) on settlement of debt	8,400	3,325	14,250	(105,641)
Loss for the period	(718,410)	(697,639)	(2,456,260)	(4,144,096)
Other comprehensive gain (loss)				
Foreign exchange gain (loss) on translation of subsidiary	(6,625)	17,591	4,396	7,583
Comprehensive loss for the period	$ (725,035)	$ (680,048)	$ (2,451,864)	$ (4,136,513)
Weighted Average Number of Common Shares Outstanding				
Basic and Diluted	76,598,286	65,764,382	76,771,398	52,532,328
Loss Per Share				
Basic and Diluted	$ (0.01)	$ (0.01)	$ (0.03)	$ (0.08)

The accompanying notes are an integral part of these condensed consolidated interim financial statements.

CARL DATA SOLUTIONS INC.
CONDENSED CONSOLIDATED INTERIM STATEMENTS OF CASH FLOWS
Presented in Canadian Dollars - unaudited

For the nine months ended March 31,		**2019**		**2018**
Cash Flows used in Operating Activities				
Loss for the period	$	(2,456,260)	$	(4,144,096)
Non-cash items				
Amortization		574,791		211,145
Accretion expense		42,552		61,534
Accrued consulting fees settled by share issuance (note 7)		80,789		-
Accrued interest expense		60,292		19,060
Accrued financing costs		15,000		-
Depreciation		166,267		-
Digital currency verification services		(18,660)		-
Digital currencies written off		11,413		-
Foreign exchange loss		-		11,278
(Gain) loss on settlement of debt		(14,250)		105,641
Realized loss on sale of digital currencies		838		-
Revaluation of digital currencies		(2,303)		-
Share-based payments		261,904		108,006
Shares issued for financing costs		30,000		291,021
Changes in non-cash working capital items:				
Accounts and other receivables		110,764		(77,754)
Prepaid expenses		12,589		(44,912)
Accounts payable and accrued liabilities		453,954		(348,900)
		(670,320)		(3,807,977)
Cash Flows used in Investing Activities				
Acquisition of Carl Poland (Note 6)		-		109
Acquisition of property and equipment		(6,769)		(250,000)
		(6,769)		(249,891)
Cash Flows provided by Financing Activities				
Net proceeds from issuance of common shares		-		4,969,149
Proceeds from exercise of stock options		-		30,000
Repurchase of common shares		(76,170)		-
Proceeds from convertible note		430,000		-
Proceeds from disposals of digital currencies		7,829		-
Short-term loans		765,000		609,140
Repayment of short-term loans		(600,000)		(394,060)
		526,659		5,214,229
Effect of foreign exchange on cash		(243)		1,516
Change in cash during the period		(150,673)		1,157,877
Cash – beginning of period		247,795		40,606
Cash – end of period	$	97,122	$	1,198,483

Supplemental Information (see note 20)

The accompanying notes are an integral part of these condensed consolidated interim financial statements.

CARL DATA SOLUTIONS INC.
CONDENSED CONSOLIDATED INTERIM STATEMENTS OF CHANGES IN SHAREHOLDERSô EQUITY
Presented in Canadian Dollars - unaudited

	Share Capital							
	Shares	Amount	Reserves	Equity feature on convertible note	Commitment to issue shares	Accumulated other comprehensive income (loss)	Deficit	Total
Balance – June 30, 2017	39,452,498	$ 7,910,928	$ 436,221	$ 78,296	$ 317,333	$ 16,407	$ (8,981,089)	$ (221,904)
Net comprehensive loss for the period	-	-	-	-	-	7,741	(4,144,096)	(4,136,355)
Shares issued for:								
Cash (note 16)	21,203,076	5,512,799	-	-	-	-	-	5,512,799
Exercise of options	272,727	47,236	(17,236)	-	-	-	-	30,000
Settlement of dissenter contingency (note 16)	933,332	293,999	-	-	(317,333)	-	-	(23,334)
Acquisition of assets (notes 7 and 16)	400,000	194,000	-	-	-	-	-	194,000
Debt settlement (note 16)	4,136,065	1,206,956	-	-	-	-	-	1,206,956
Share issuance costs ï cash (note 16)	-	(543,649)	-	-	-	-	-	(543,649)
Share issuance costs ï warrants (note 16)	-	(26,102)	26,102	-	-	-	-	-
Share issuance costs ï options (note 16)	-	(338,305)	338,305	-	-	-	-	-
Share-based payments (note 18)	-	-	108,006	-	-	-	-	108,006
Balance – March 31, 2018	66,397,698	14,257,862	891,398	78,296	-	24,148	(13,125,185)	2,126,519
Net comprehensive loss for the period	-	-	-	-	-	17,515	(564,422)	(546,907)
Shares issued for:								
Acquisition of Astra (notes 8 and 16)	9,300,000	1,348,500	-	-	-	-	-	1,348,500
Debt settlement (note 16)	102,631	18,474	-	-	-	-	-	18,474
Accrued commitment to issue shares (note 7)	-	-	-	-	113,211	-	-	113,211
Share-based payments (note 18)	75,000	13,500	287,776	-	-	-	-	301,276
Settlement of convertible note (note 15)	-	-	76,819	(76,819)	-	-	-	-
Warrants issued for convertible note (note 15)	-	-	37,516	-	-	-	-	37,516
Balance – June 30, 2018	75,875,329	15,638,336	1,293,509	1,477	113,211	41,663	(13,689,607)	3,398,589
Net comprehensive loss for the period	-	-	-	-	-	4,396	(2,456,260)	(2,451,864)
Shares issued for:								
Acquisition of assets (notes 7 and 16)	400,000	194,000	-	-	(113,211)	-	-	80,789
Debt settlement (note 16)	540,000	57,750	-	-	-	-	-	57,750
Financing costs (notes 14 and 16)	214,285	22,500	-	-	-	-	-	22,500
Shares repurchased (note 16)	(258,216)	(76,170)	-	-	-	-	-	(76,170)
Accrued financing fees (note 14)	-	-	-	-	10,000	-	-	10,000
Issuance of convertible notes (note 15)	-	-	-	94,381	-	-	-	94,381
Share-based payments (note 18)	-	-	261,904	-	-	-	-	261,904
Balance – March 31, 2019	76,771,398	$ 15,836,416	$ 1,555,413	$ 95,858	$ 10,000	$ 46,059	$ (16,145,867)	$ 1,397,879

The accompanying notes are an integral part of these condensed consolidated interim financial statements.

1. Description of Business and Nature of Operations

CARL Data Solutions Inc. (ñ**CARL**ò or the ñ**Company**ò) was incorporated under the Business Corporations Act (British Columbia) on January 17, 2014. CARL is a developer of Big-Data-as-a-Service (ñ**BDaaS**ò)-based solutions, providing the next generation data collection, storage and analytic solutions for data-centric companies.

CARL is a public company that is listed on the Canadian Securities Exchange (ñ**CSE**ò) (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 ï 1090 West Georgia Street, Vancouver, British Columbia, V6E 3V7. The Companyôs consolidated financial statements include the financial statements of the following subsidiaries:

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

These 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 these consolidated interim financial statements. These condensed consolidated interim 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. At March 31, 2019, the Company had not achieved profitable operations, had accumulated a deficit of $16,145,867 since inception and expects to incur further operating losses in the development of its business. The Companyôs 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 matters indicate material uncertainties that may cast significant doubt about the Companyôs ability to continue as a going concern.

2. Basis of Preparation

Statement of Compliance

These condensed consolidated interim financial statements, including comparatives, have been prepared using accounting policies consistent with International Financial Reporting Standards (ñ**IFRS**ò) issued by the International Accounting Standards Board (ñ**IASB**ò) and Interpretations of the International Financial Reporting Interpretations Committee (ñ**IFRIC**ò).

Basis of Presentation

The condensed consolidated interim financial statements have been prepared on a historical cost basis except for certain financial instruments measured at fair value. In addition, these consolidated financial statements have been prepared using the accrual basis of accounting, except for cash flow information. The consolidated financial statements of the Company are presented in Canadian dollars, which is the functional currency of the parent company.

Significant accounting judgments, estimates, and assumptions

The preparation of these condensed consolidated interim financial statements requires management to make certain estimates, judgments and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported revenues and expenses during the period. Actual results could differ from these estimates.

The Company makes estimates and assumptions about the future that affect the reported amounts of assets and liabilities. Estimates and judgments are continually evaluated based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. In the future, actual experience may differ from these estimates and assumptions.

2. Basis of Preparation (continued)

Basis of Consolidation

These condensed consolidated interim financial statements include the financial statements of CARL and its controlled and wholly-owned subsidiaries ETS, FlowWorks, Astra, and Carl PL. ETS, FlowWorks, and Carl PL have historically maintained a fiscal year-end of December 31 and retained that year-end post acquisition. The Company may change the year-end to match the Companyĝs year-end in the future. Astra historically maintained a fiscal year-end of July 31, which was changed post acquisition to June 30 to match the Companyĝs year-end. Control is achieved where the Company has power over an entity, has exposure or rights to variable returns from its involvement with the entity and has the ability to use its power over the entity to affect the amount of the investorĝs returns. Subsidiaries are included in the consolidated financial statements from the date control commences until the date control ceases. All inter-company balances, transactions, revenues and expenses have been eliminated on consolidation.

3. Significant Accounting Policies

Except for the adoption of IFRS 15 and IFRS 9, the accounting policies applied in these condensed consolidated interim financial statements are the same as those applied in the most recent audited annual consolidated financial statements as at and for the year ended June 30, 2018 and reflect all the adjustments necessary for fair presentation in accordance with IAS 34.

New standards and interpretations adopted

IFRS 9 Financial Instruments

IFRS 9 sets out requirements for recognizing and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items. This standard replaces IAS 39 Financial Instruments: Recognition and Measurement (ñIAS 39ò).

The Company has adopted IFRS 9 retrospectively as of July 1, 2018. Changes in accounting policies resulting from the adoption of IFRS 9 do not have a material impact on the Companyĝs consolidated financial statements.

Classification and measurement of financial assets and financial liabilities

IFRS 9 replaces the guidance in IAS 39, on the classification and measurement of financial assets. IFRS 9 eliminates the existing IAS 39 categories of held-to-maturity, available-for-sale and loans and receivable.

Financial assets will be classified into one of two categories on initial recognition:

- Financial assets measured at amortized cost; or
- Financial assets measured at fair value.

The classification of financial assets under IFRS 9 is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. A financial asset (unless it is a trade receivable without a significant financing component that is initially measured at the transaction price) is initially measured at fair value plus, for an item not at fair value through profit or loss, transaction costs that are directly attributable to its acquisition. For financial assets measured at amortized cost, these assets are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.

The Companyĝs financial assets previously carried as loans and receivables are now classified as amortized cost without material impact to carrying values.

Impairment of financial assets

IFRS 9 replaces the ôincurred lossô model in IAS 39 with an expected credit loss (ñECLò) model. Using the simplified approach for trade receivables, the Company will measure loss allowances for trade and other receivables at an amount equal to lifetime ECLs. ECLs are a probability-weighted estimate of credit losses.

3. Significant Accounting Policies (continued)

New standards and interpretations (continued)

IFRS 9 Financial Instruments (continued)

Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets. Impairment losses on trade and other receivables are presented as bad debts expense in the statement of loss and comprehensive loss, similar to the presentation under IAS 39.

The Company has determined that the application of IFRS 9ǿs impairment requirements as at July 1, 2018 does not result in any additional impairment allowances.

IFRS 15 Revenue from Contractors with Customers

IFRS 15 was issued with the intent of significantly enhancing consistency and comparability of revenue recognition practices across entities and industries. IFRS 15 replaces IAS 18 Revenue, IAS 11 Construction Contracts and related interpretation. The new standard establishes a single, principles-based five-step model to be applied to all contracts with customers and introduces new and enhanced disclosure requirements.

The Company has adopted the modified retrospective approach which allows the cumulative impact of the adoption to be recognized in retained earnings as of July 1, 2018 and that the comparative figures will not be restated. Changes in accounting policies resulting from the adoption of IFRS 15 do not have a material impact on the Companyǿs consolidated financial statements.

Revenue recognition

The Company earns revenue from the provision of digital currency verification services and in its subsidiaries, FlowWorks, ETS, and Astra through the performance of services revenue and data center hosting.

i. Services revenue

Services revenue includes custom programming service contracts, data services through software subscription revenue, and the supply of social referral software to clients. Services revenue is measured at the fair value of the consideration received or receivable for services, net of discounts and sales taxes. Consideration received from customers in advance is recorded as deferred revenue. Services revenue is recognized as the Company satisfies its performance obligation over time.

ii. Data center hosting

Revenue from data center hosting at the fair value of the consideration received or receivable for services, net of discounts and sales taxes and is recognized as the Company satisfies its performance obligation over time.

iii. Digital currency verification services

The Company provides transaction verification services within digital currency networks, for which it receives digital currency from each specific network as consideration. Revenue is measured based on the fair value of the coins received. The fair value is determined using the closing spot price of the coin on the date of receipt, based on prices available on www.cryptocompare.com. The coins are recorded on the statement of financial position, as digital currencies, at their fair value and re-measured at each reporting date. Revaluation gains or losses, as well as gains or losses on the sale of coins for traditional (fiat) currencies are included in profit and loss in accordance with the Companyǿs treatment of its digital currencies as a traded commodity.

There is currently no specific definitive guidance in IFRS or alternative accounting frameworks for the accounting for the mining and strategic selling of digital currencies and management has exercised significant judgment in determining the appropriate accounting treatment for the recognition of revenue for mining of digital currencies. Management has examined various factors surrounding the substance of the Companyǿs operations, including the stage of completion being the completion and addition of a block to a blockchain and the reliability of the measurement of the digital currency received.

3. Significant Accounting Policies (continued)

Accounting Standards and Amendments Issued but Not Yet Adopted

IFRS 16 Leases

IFRS 16 replaces IAS 17 ï Leases and requires lessees to account for leases on the statement of financial position by recognizing a right to use asset and lease liability. The standard is effective for annual reports beginning on or after January 1, 2019, with earlier adoption permitted. The Company is currently evaluating the impact of the application of this standard.

4. Significant Accounting Judgments and Estimates

Critical accounting judgments

The functional currency of an entity is assessed on a standalone basis to determine the economic substance of the currency in which each entity performs its operations. The functional currency of the parent company, ETS, and Astra is the Canadian dollar. The functional currency of FlowWorks is the US dollar and the functional currency of Carl PL is the Polish Zloty.

The application of the Companyĝs accounting policy for software development expenditures requires judgment in determining whether it is likely that future economic benefits will flow to the Company, which may be based on assumptions about future events or circumstances. Estimates and assumptions made may change if new information becomes available. If, after the expenditure is capitalized, information becomes available suggesting that the recovery of the expenditure is unlikely, the amount capitalized is written off in the statement of comprehensive loss in the period the new information becomes available.

The Company has exercised judgment in quantifying the allowance for doubtful accounts receivable. While it is possible that certain accounts receivable considered good may turn doubtful at a later date, there are no indicators that they would at the present time.

Critical accounting estimates

The Company has made estimates with respect to the acquisition date fair values of the identifiable assets and liabilities of Carl PL (note 6), AB Embedded (note 7) and Astra (note 8). The valuation of intangible assets requires management to use valuation techniques to assess the fair values of assets and liabilities acquired at acquisition date. The Company used its judgment to select methods and makes assumptions that reflected market conditions as at the acquisition dates.

The determination of income tax is inherently complex and requires making certain estimates and assumptions about future events. While income tax filings are subject to audits and reassessments, the Company has adequately provided for all income tax obligations. However, changes in facts and circumstances as a result of income tax audits, reassessments, jurisprudence and any new legislation may result in an increase or decrease in our provision for income taxes.

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.

5. Acquisition of FlowWorks

On October 13, 2015, the Company completed the acquisition of FlowWorks pursuant to the terms of a share exchange agreement between CARL, FlowWorks and the majority shareholders of FlowWorks. CARL acquired 100% of the outstanding common shares of FlowWorks in exchange for 7,629,397 common shares of the Company issued to two shareholders of FlowWorks. One shareholder of FlowWorks, holding approximately 11% of FlowWorks, dissented to the transaction. The Company agreed to assume any obligation in connection with payment of fair value for such dissenting shares and all expenses in connections with the dissenterõs rights. The Company agreed to a settlement with the dissenter by paying US $111,000 and issuing 933,332 common shares during the year ended June 30, 2018 (note 16).

6. Acquisition of Carl PL

On March 16, 2018, the Company acquired 100% of the outstanding shares of Carl PL pursuant to a share sale agreement between CARL and Carl PLõs shareholders. CARL acquired 100% of the outstanding shares of Carl PL by paying $2,000.

Prior to the acquisition, Carl PL provided consulting services to the Company and has been involved in the development of an anomaly detection application for CARLõs customers using the ETS NoSQL data collection and storage platform. The acquisition of the outstanding shares constitutes a business combination and the purchase price has been allocated as follows:

Purchase price consideration		
Cash	$	2,000
Assets acquired and liabilities assumed		
Cash	$	2,109
Accounts payable		(109)
	$	2,000

7. Acquisition of AB Embedded Assets

On November 30, 2017, the Company completed the acquisition of substantially all of the assets of AB Embedded, an unrelated third party. The acquired combination of hardware designs, development tools and source code provide the Company with the opportunity to provide custom control systems developed in-house, offering synergies with the Companyõs existing BDaaS solutions.

In exchange for AB Embeddedõs assets, the Company issued 400,000 common shares valued at $194,000 (note 16). Concurrent with the acquisition, the Company entered into an independent contractor agreement with AB Embedded, whereby AB Embedded will provide services to the Company for an indefinite term. On November 29, 2018 this contractor agreement was cancelled and replaced by a consulting agreement, which was terminated on February 15, 2019, ending any working relationship between Carl and AB Embedded. During the period ended March 31, 2019 the Company issued 400,000 common shares valued at $194,000 of which $113,211 in consulting fees had been accrued as a commitment to issue shares as of June 30, 2018.

The acquisition of assets constitutes a business combination and the purchase price has been allocated as follows:

Purchase price consideration		
Value of 400,000 common shares issued at $0.485	$	194,000
Assets acquired		
Property and equipment	$	114,500
Electrical systems certification		23,500
Control system source code		56,000
	$	194,000

7. Acquisition of AB Embedded Assets (continued)

The property and equipment acquired is comprised of hardware and manufacturing equipment for the development of custom devices, computer equipment, and office furniture and has been recognized at fair value on the date of acquisition. The control system source code relates to various pieces of source code for the development of the custom control systems and will be amortized over a 3-year term (note 12). The Company also acquired AB Embeddedôs global production electrical systems certification, which will also be amortized over a 3-year term (note 12).

8. Acquisition of Astra

On June 18, 2018, the Company completed the acquisition of Astra pursuant to the terms of a securities exchange agreement between CARL, Astra and the shareholders of Astra. CARL acquired 100% of the outstanding common shares of Astra in exchange for 9,300,000 common shares of the Company issued to three shareholders of Astra (note 16) and agreeing to repay Astraôs existing loans by making payments of $300,000 on July 18, 2018 (paid) and $300,000 on December 18, 2018 (paid).

This acquisition is consistent with the Companyôs corporate growth strategy to build and acquire applications that assist in the collection, storage and analysis of large volumes of information for data-centric companies. Astra is a technology company with multiple potential revenue streams including data center hosting, big data analytical services, and the manufacture of Industrial Internet of Things (**"IIoT")** devices.

Purchase price consideration		
Value of 9,300,000 common shares issued at $0.145	$	1,348,500
Assets acquired		
Cash	$	60
Accounts receivable		21,216
Prepaid expenses		158,231
Property and equipment		390,342
Augmented business intelligence software		540,697
Environmental sensor firmware		181,133
Preferential lease		1,079,994
Accounts payable		(40,527)
Loans payable		(600,000)
Deferred income tax liabilities		(465,000)
Goodwill on acquisition		82,354
	$	1,348,500

Accounts receivable acquired with Astra are goods and services tax (**"GST"**) receivables and are recorded at fair value at the date of acquisition. The fair value of the accounts receivable at acquisition equals its carrying value at that date. The property and equipment acquired is comprised of production and manufacturing equipment for the development of IIoT devices and infrastructure for data center hosting all located in Trail, British Columbia and has been recognized at fair value on the date of acquisition. The environmental sensor firmware relates to various pieces of firmware source code for environmental monitoring devices and will be amortized over a 3-year term (note 12). The augmented business intelligence software acquired is used for the Companyôs big data analytical service contracts and is amortized over a 3-year term (note 12). The preferential lease acquired relates to a discount on data hosting, office, and manufacturing space along with access and rights to significant volumes of power required for data hosting and is amortized over a 4-year term (note 12).

Loans payable include $600,000 (note 14) to Astraôs former shareholders and their related organizations, of which $300,000 was paid on July 18, 2018 and $300,000 was paid on December 18, 2018. Income tax consequences of the transaction included a deferred income tax liability of $465,000, which together with the fair values of other assets and liabilities acquired resulted in the recognition of $82,354 in goodwill that is not deductible for tax purposes.

The above purchase price allocation calculations are preliminary and have not been finalized. Any future adjustments will be recorded prospectively as changes in estimates. Prior to acquisition, Astra was a private company and financial information was impractical to obtain and verify.

9. Accounts and Other Receivables

		March 31, 2019		June 30, 2018
Gross trade accounts receivable	$	285,751	$	416,239
Less: allowance for doubtful accounts		(9,394)		(22,740)
Net trade accounts receivable		276,357		393,499
GST receivable		13,548		38,909
	$	289,905	$	432,408

Reconciliation of allowance for doubtful accounts is as follows:

		March 31, 2019		June 30, 2018
Balance ï beginning of period	$	22,740	$	6,512
Change in provision		-		16,359
Recovery		(13,346)		(131)
Balance ï end of period	$	9,394	$	22,740

10. Digital Currencies

As at March 31, 2019, the Companyọs digital currencies consisted of the below digital currencies, with a fair value of $9,127. Digital currencies are carried at their fair value determined using the closing spot price of the coin at the reporting date, based on prices available on www.cryptocompare.com. The Companyọs holdings of digital currencies consist of the following:

		March 31, 2019		June 30, 2018
BitCoin	$	4,118	$	4,717
Ethereum		4,787		1,554
Dash		222		1,973
	$	9,127	$	8,244

The continuity of digital currencies was as follows:

		March 31, 2019		June 30, 2018
Balance ï beginning of the period	$	8,244	$	-
Digital currency mined		18,660		10,587
Digital currency sold		(8,667)		-
Digital currency written off		(11,413)		-
Revaluation adjustment		2,303		(2,343)
	$	9,127	$	8,244

10. Digital Currencies (continued)

During the nine-month period ended March 31, 2019, the Company sold digital currencies with a cost of $8,667 for proceeds of $7,829 and recognized a loss on sale of $838. The Company held digital currencies with QuadrigaCX, a cryptocurrency exchange that filed for bankruptcy during the period ended March 31, 2019. As the Company does not expect to recuperate these digital currencies, it has written off the value of digital currencies held with the exchange at the time of bankruptcy of $11,413.

11. Property and Equipment

	Machinery and equipment	Computer equipment	Furniture and fixtures	Digital currency processors	Total
Cost					
Balance ï June 30, 2017	$ -	$ -	$ -	$ -	$ -
Additions (notes 7 and 8)	102,790	10,506	391,546	250,000	754,842
Balance ï June 30, 2018	102,790	10,506	391,546	250,000	754,842
Additions	-	-	-	41,337	41,337
Balance ï March 31, 2019	102,790	10,506	391,546	291,337	796,179
Accumulated Depreciation					
Balance ï June 30, 2017	-	-	-	-	-
Depreciation	17,911	1,831	2,707	30,822	53,271
Balance ï June 30, 2018	17,911	1,831	2,707	30,822	53,271
Depreciation	19,097	1,952	58,326	86,892	166,267
Balance ï March 31, 2019	37,008	3,783	61,033	117,714	219,538
Balance ï June 30, 2018	$ 84,879	$ 8,675	$ 388,839	$ 219,178	$ 701,571
Balance ï March 31, 2019	$ 65,782	$ 6,723	$ 330,513	$ 173,623	$ 576,641

Digital currency processors

On January 15, 2018, the Company entered into an agreement with Connected Fintech Inc. (ñConnectedò), whereby Connected agreed to develop and maintain a cryptocurrency mining facility comprising digital currency processors on the Companyôs behalf. Under the terms of the agreement, the Company agreed to pay Connected:

(a) $250,000 (paid) plus the issuance of 500,000 common shares on the date of signing;
(b) 500,000 common shares upon completion of development;
(c) 500,000 common shares six months from the completion date; and
(d) 500,000 common shares twelve months from the completion date.

The Company also agreed to pay Connected a royalty equal to 15% of monthly net revenues generated from the mining facility and a monthly retainer of $4,000.

On May 29, 2018, the Company entered into an amended agreement with Connected Fintech removing the requirements to issue the aggregate 2,000,000 common shares or pay the monthly retainer of $4,000. At this time, Connected Fintech ceased their services to Carl and the Agreements were terminated.

12. Intangible assets

	Software in Development	FlowWorks Software Application	FlowWorks Customer List	Electrical Systems Certification	Control System Source Code	Augmented Business Intelligence Software	Environmental Sensor Firmware	Preferential Lease	Total
Cost									
Balance ï June 30, 2018	$ 287,600	$ 387,634	$ 659,154	$ -	$ -	$ -	$ -	$ -	$ 1,334,388
Additions (notes 7 and 8)	-	-	-	23,500	56,000	540,697	181,133	1,079,994	1,881,324
Reallocation	(287,600)	287,600	-	-	-	-	-	-	-
Balance ï June 30, 2018 and March 31, 2019	-	675,234	659,154	23,500	56,000	540,697	181,133	1,079,994	3,215,712
Accumulated Amortization									
Balance ï June 30, 2017	-	224,068	228,495	-	-	-	-	-	452,563
Amortization	-	174,654	129,290	4,569	10,889	7,509	-	11,249	338,160
Balance ï June 30, 2018	-	398,722	357,785	4,569	10,889	7,509	-	11,249	790,723
Amortization	-	116,508	100,735	5,875	14,000	135,174	-	202,499	574,791
Balance ï March 31, 2019	-	515,230	458,520	10,444	24,889	142,683	-	213,748	1,365,514
Cumulative Translation Adjustment									
Balance ï June 30, 2017	-	10,473	8,539	-	-	-	-	-	19,012
Foreign currency translation	-	(2,686)	729	-	-	-	-	-	(1,957)
Balance ï June 30, 2018	-	7,787	9,268	-	-	-	-	-	17,055
Foreign currency translation	-	(24)	2,600	-	-	-	-	-	2,576
Balance ï March 31, 2019	-	7,763	11,868	-	-	-	-	-	19,631
Balance ï June 30, 2018	$ -	$ 284,299	$ 310,637	$ 18,931	$ 45,111	$ 533,188	$ 181,133	$ 1,068,745	$ 2,442,044
Balance ï March 31, 2019	$ -	$ 167,767	$ 212,502	$ 13,056	$ 31,111	$ 398,014	$ 181,133	$ 866,246	$ 1,869,829

12. Intangible assets (continued)

ETS Software in Development

A total of $83,428 had been expended on third party software programmers in the development of the customer referral software that ETS has created. The remaining $204,172 is a fair market valuation adjustment upon the purchase of ETS by CARL. During the year ended June 30, 2018, the Company integrated the ETS software with the FlowWorks Software Application and accordingly has reallocated the amount and begun amortizing on a straight-line basis over 3 years.

FlowWorks Software Application

The software application relates to the web-based application acquired with FlowWorks. During the year ended June 30, 2018, the integration of the ETS Software in Development was completed and $287,600 was reallocated to the FlowWorks Software Application.

FlowWorks Customer List

The customer list relates to the customers acquired with FlowWorks. The asset is a finite life asset and is being amortized straight-line over a period of five years, with approximately 1.50 years remaining unamortized.

Electrical Systems Certification

The electrical systems certification comprise the fair value of AB Embeddedôs global production electrical systems certification acquired during the year ended June 30, 2018 (note 7). The asset is a finite life asset and will be amortized over a 3-year term, with approximately 1.75 years remaining unamortized.

Control System Source Code

The control system source code relates to the fair value of various pieces of source code for the development of the custom control systems acquired during the year ended June 30, 2018 (note 7). The asset is a finite life asset and will be amortized over a 3-year term, with approximately 1.75 years remaining unamortized.

Augmented Business Intelligence Software

The Augmented Business Intelligence Software relates to the fair value of the big data analytics software and code obtained on the acquisition of Astra during the year ended June 30, 2018 (note 8). The asset is a finite life asset and will be amortized over a 3-year term, with approximately 2.25 years remaining unamortized.

Environmental Sensor Firmware

The Environmental Sensor Firmware relates to the fair value of the source code for the environmental sensor firmware obtained on the acquisition of Astra during the year ended June 30, 2018 (note 8). The asset is a finite life asset and will be amortized over a 3-year term, with approximately 3.0 years remaining unamortized.

Preferential Lease

The preferential lease relates to the fair value of a favourable sublease agreement obtained on the acquisition of Astra during the year ended June 30, 2018 (note 8). The agreement includes discounted office, data hosting, and manufacturing space in Astraôs facility in Trail, BC along with guaranteed access to the significant volumes of power required for the operation of a data hosting facility at favourable rates. The asset is a finite life asset and will be amortized over a 4-year term, with approximately 3.25 years remaining unamortized.

13. Accounts Payable and Accrued Liabilities

		March 31, 2019		June 30, 2018
Trade accounts payable	$	576,642	$	262,386
Due to related parties (note 21)		186,680		70,529
Accrued liabilities		-		40,100
	$	763,322	$	373,015

14. Loans Payable

		March 31, 2019		June 30, 2018
Balance ï beginning of period	$	604,000	$	448,907
Advances of loans		765,000		609,140
Interest and fees accrued		70,024		19,060
Repayments ï cash		(604,732)		(394,060)
Assumed on acquisition of Astra (note 8)		-		600,000
Settlements ï convertible debenture issued (note 15)		(300,000)		-
Settlements ï shares (note 16)		-		(679,047)
Balance ï end of period		534,292		604,000
Non-current		(225,000)		-
Current portion	$	309,292	$	604,000

During the nine-month period ended March 31, 2019, the Company entered into the following loan agreements:

a) $300,000 received from an armῶs-length party with a maturity of September 13, 2018. In connection with the loan, the Company agreed to pay interest of $15,000 and issue 214,285 common shares on maturity (issued). Additional interest is payable on the loan amount at the rate of $15,000 for any and every part of 59 days that the loan is outstanding after the maturity. The Company settled the principal of $300,000 during the period ended March 31, 2019 through the issuance of a convertible note in the same amount (note 15). As at March 31, 2019, interest payable of $41,695 remains included in the balance of loans payable;

b) $100,000 received from an armῶs-length party with a maturity of January 26, 2019. In connection with the loan the Company agreed to pay a transaction fee of $5,000 and issue 64,516 common shares. Since the loan was not repaid by January 26, 2019, interest of 13% per annum is accruing on the principal amount of $100,000. As at March 31, 2019, $10,000 relating to the common shares has been accrued to commitment to issue shares and $5,000 in transaction fees has been included in the balance of loans payable;

c) $50,000 from an armῶs-length party, repayable on demand and non-interest bearing;

d) $90,000 from two directors of the Company with maturities of January 31, 2019. In connection with the loans, the Company will pay 20% simple interest per annum.; and

e) $225,000 from an armῶs-length party bearing interest of 2.5% + prime on a monthly basis. After 24 months, the Company will make monthly payments over 60 months inclusive of principal and interest components.

During the year ended June 30, 2018, the Company was advanced a $609,140 in short term loans from unrelated parties. The loans were unsecured, non-interest bearing, and repayable upon demand. During the year ended, the Company issued 2,611,714 common shares at a deemed price of $0.26 to settle short term debt in the aggregate of $679,047 and repaid $394,060 with cash.

15. Convertible Notes

During the year ended June 30, 2016, the Company completed a senior secured collateralized convertible note (ñNoteò) financing of up to $2,000,000 to be received in tranches. All tranches of the Note bear interest of 10% (12% if in default) per annum, calculated and payable monthly, in advance. All tranches mature within two years of the initial issuance.

On June 30, 2016, the Company issued an initial tranche of $500,000 incurring total transaction costs of $432,075. The principal, at the option of the holder, will be convertible into common shares of the Company at a conversion price of $0.45 per common share, subject to adjustment as per the agreement.

If at any time following four months after the issue date of any Note, the closing price of the Company is $0.75 per share for 30 consecutive trading days with a daily weighted-average trading volume of more than 400,000 shares, the Company may force the conversion of one-half of the aggregate principal.

From and after the one-year anniversary of any Note, the Company, at its option, may prepay, without notice or penalty, the principal amount of all the outstanding Notes in full or in part together with any accrued and unpaid interest.

Each tranche of the Note contains both an equity component, being the holderφs conversion right, and a liability component, each of which are presented separately on the consolidated statement of financial position. The Company allocated the transaction costs to the debt and equity components based on the relative fair values of the Note and the equity conversion option. Interest and transaction costs are recognized by accreting the liability component to its face value over the term of the Note.

The Company paid a non-refundable commitment fee, included in total transaction costs, of $50,000 and 375,000 shares. Total commitment fees of $237,500, applicable to the full facility, were initially incurred and deferred. These fees are recognized as part of the initial carrying values of each tranche of debt issued based on the relative percentage of each tranche face value to the total facility value of $2,000,000. At March 31, 2019 $169,327 (June 30, 2018 ï $169,327) is recorded in prepaid expenses. The Company shall issue 800,000 bonus shares on the closing date and on the date of conversion. 400,000 of these bonus shares were issued on the closing date and included in total transaction costs.

At any time after issuance, the holder has the right to convert the principal amount of the Note at the above conversion price.

During the year ended June 30, 2017, the Company entered into an amendment allowing the conversion at the price of $0.34 per share and of the initial $500,000 tranche, $405,000 was converted through the issuance of 1,191,176 common shares. The Company recognized $458,012 to the statement of comprehensive loss as a result of the conversion. In connection with the conversion, the Company was required to issue 400,000 common shares to the holder with a fair value of $156,000 to settle amounts payable of $136,000. The 400,000 common shares issued represent the balance of the bonus shares not issued during fiscal 2016.

During the year ended June 30, 2017, the Company initiated issuances of the Companyφs convertible notes and received $390,000 in proceeds, of which $87,189 was recognized to equity upon receipt. During fiscal 2017 issuances of Notes with face values and issuance dates were completed as follows: September 1, 2016 - $160,000; September 30, 2016 - $150,000 and April 30, 2017 - $80,000.

During the year ended June 30, 2018, all future royalties, valued at $291,022, were settled by issuance of 1,119,316 common shares (note 16). On June 29, 2018, the Company made repayments of $475,000 and entered into an amending agreement with the issuer whereby the maturity date was extended to December 31, 2019 allowing the Company to purchase an additional $1,000,000 subject to the same terms as the existing facility. As consideration for the extension, the Company issued 750,000 common share purchase warrants with an exercise price of $0.25 and life of two years. The fair value of the warrants was estimated to be $37,516 using the Black-Scholes option pricing model with a volatility of 97.96%, expected life of 2 years, risk free rate of 1.91% and dividend rate of 0% and is included in prepaid expenses as at March 31, 2019.

On the repayment of $475,000, the Company reclassified $76,819 relating to the equity component of the settled notes from equity conversion feature on convertible note to reserves. As at March 31, 2019, the Company has not initiated any further issuances of the convertible notes.

15. Convertible Notes (continued)

During the period ended March 31, 2019, the Company issued the following convertible notes:

a) $300,000, bearing interest at a rate of 12% per annum and maturing on December 24, 2019. The principal and interest, at the option of the holder, will be convertible into common shares of the Company at a conversion price of $0.15 per common share. The Company allocated $41,538 to the equity component of the note;

b) $300,000 in settlement of loans payable (note 14), bearing interest at a rate of 12% per annum and maturing on December 27, 2019. The principal and interest, at the option of the holder, will be convertible into common shares of the Company at a conversion price of $0.15 per common share. The Company allocated $41,539 to the equity component of the note;

c) $70,000, bearing interest at a rate of 10% per annum and maturing on July 28, 2019. The principal and interest, at the option of the holder, will be convertible into common shares of the Company at a conversion price of $0.15 per common share. The Company allocated $6,087 to the equity component of the note; and

d) $60,000, bearing interest at a rate of 10% per annum and maturing on July 28, 2019. The principal and interest, at the option of the holder, will be convertible into common shares of the Company at a conversion price of $0.15 per common share. The Company allocated $5,217 to the equity component of the note.

		March 31, 2019		June 30, 2018
Balance, beginning of period	$	10,000	$	387,734
Additions		730,000		-
Equity component of additions		(94,381)		-
Accretion of convertible note		42,552		97,266
Repayment of convertible note		-		(475,000)
Balance, end of period		688,171		10,000
Current portion				-
Long-term portion	$	-	$	10,000
Convertible note, equity component, end of period	$	95,858	$	1,477
Face value of notes at maturity	$	740,000	$	10,000

16. Share Capital

(a) Authorized Share Capital

As at March 31, 2018, the authorized share capital of the Company is an unlimited number of common shares without par value. All issued shares, consisting only of common shares are fully paid.

(b) Issued Share Capital

During the period ended March 31, 2019, share activity was as follows:

(i) On August 31, 2018, the Company repurchased and returned to treasury 184,440 common shares at a price of US$0.225 per share pursuant to a settlement agreement entered with the former dissenting shareholder (note 5) and recognized as a decrease to share capital of $54,010.

16. Share Capital (continued)

(b) Issued Share Capital (continued)

(ii) On October 22, 2018, the Company issued 330,000 common shares at a price of $0.105 per common share, for a total value of $34,650, to settle accounts payable with a director of $33,000. The Company recognized a loss of $1,650 on the settlement to the loss for the period.

(iii) On October 22, 2018, the Company issued 214,285 common shares at a price of $0.105 per common share, for a total value of $22,500, to settle finance fees on a short-term loan (note 14) previously accrued at $30,000. The Company recognized a gain of $7,500 on the settlement to the loss for the period.

(iv) On November 30, 2018, the Company issued 400,000 common shares at a price of $0.485 per common share, for a total value of $194,000, as required per the acquisition of the AB Embedded assets (note 7).

(v) On December 19, 2018, the Company repurchased and returned to treasury 36,888 common shares at a price of US$0.225 per share pursuant to a settlement agreement entered with the former dissenting shareholder (note 5) and recognized as a decrease to share capital of $11,143.

(vi) On January 14, 2019, the Company repurchased and returned to treasury 36,888 common shares at a price of US$0.225 per share pursuant to a settlement agreement entered with the former dissenting shareholder (note 5) and recognized as a decrease to share capital of $11,017.

(vii) On February 20, 2019, the Company issued 210,000 common shares at a price of $0.11 per common share, for a total value of $23,100, to settle accounts payable with a director of $31,500. The Company recognized a gain of $8,400 on the settlement to loss for the period.

As at March 31, 2019 a total of 186,228 (June 30, 2018 ï 296,892) common shares remain in escrow.

During the year ended June 30, 2018, shares activity was as follows:

(i) On July 4, 2017, the Company issued 888,888 common shares in settlement of the dissenting shareholder liability (note 5) at a deemed price of $0.31 per common share. Included in profit or loss is a gain of $26,667 related to the difference between market value of the shares on settlement and the value accrued at June 30, 2017.

(ii) On September 5, 2017, the Company completed the first tranche of a non-brokered private placement by issuing 2,055,000 common share units (each, a ñUnitò) at a price of $0.26 per unit for gross proceeds of $534,300. Each Unit was comprised of one common share and one common share purchase warrant, each warrant being exercisable at a price of $0.40 per share for a period of two years from issuance and is subject to accelerated expiration in the event that shares trade at a price greater than $0.75 per share for ten consecutive trading days.

In connection with the offering, the Company paid a cash commission of $42,744 and issued 164,400 non-transferrable unit finderõs warrants, valued at $21,169. Each finderõs warrant entitles the holder to purchase one finderõs unit at a price of $0.33 per finderõs unit for a two-year period from the closing date. Each finderõs unit contains one common share and one common share purchase warrant, exercisable at $0.40 for a period of two years from the closing date. The Company incurred additional share issuance costs of $25,600 in connection with the closing.

(iii) On September 5, 2017, the Company issued 2,611,714 Units in settlement of loans from unrelated parties (note 14) at a deemed price of $0.26 per common share. Included in profit or loss is a loss of $91,409 related to the difference between market value of the shares on settlement and the value of the debt settled.

(iv) On September 5, 2017, the Company issued 1,119,316 Units to settle future royalty payments on its convertible note (note 15) of $291,022. Included in profit or loss is a loss of $39,176 related to the difference between market value of the shares on settlement and the value of the debt settled.

16. Share Capital (continued)

(b) Issued Share Capital (continued)

(v) On October 25, 2017, The Company completed the second and final tranche of a non-brokered private placement by issuing 1,618,824 common share units (each, a ñUnitò) at a price of $0.26 per unit for gross proceeds of $420,894. Each Unit was comprised of one common share and one common share purchase warrant, each warrant being exercisable at a price of $0.40 per share for a period of two years from issuance and is subject to accelerated expiration in the event that shares trade at a price greater than $0.75 per share for ten consecutive trading days.

(vi) In connection with the offering, the Company paid a cash commission of $11,846 and issued 45,560 non-transferrable unit finderõs warrants. Each finderõs warrant entitles the holder to purchase one finderõs unit at a price of $0.33 per finderõs unit for a two-year period from the closing date. Each finderõs unit contains one common share and one common share purchase warrant, exercisable at $0.40 for a period of two years from the closing date.

(vii) On October 25, 2017, the Company settled debts with three related party debtholders in the aggregate amount of $79,500 by issuing 305,768 Units at price of $0.26 per Unit.

(viii) On November 2, 2017, the Company issued 272,727 common shares through the exercise of stock options for gross proceeds of $30,000.

(ix) On November 27, 2017, The Company completed a non-brokered private placement by issuing 6,486,921 common share units (each, a ñUnitò) at a price of $0.26 per unit for gross proceeds of $1,686,599. Each Unit was comprised of one common share and one common share purchase warrant, each warrant being exercisable at a price of $0.40 per share for a period of two years from issuance and are subject to accelerated expiration in the event that shares trade at a price greater than $0.75 per share for ten consecutive trading days.

In connection with the offering, the Company paid a cash commission of $208 and issued 1,000 non-transferrable finderõs warrants exercisable at $0.40 for a period of two years.

(x) On November 30, 2017, the Company issued 400,000 common shares on the acquisition of the assets of AB Embedded (note 7) valued at $194,000.

(xi) On December 12, 2017, the Company issued 44,444 common shares in settlement of the dissenting shareholder liability (note 5) at a deemed price of $0.415 per common share. Included in profit or loss is a loss of $3,333 related to the difference between market value of the shares on settlement and the value accrued at June 30, 2017.

(xii) On January 5, 2018, the Company completed a rights offering by issuing an aggregate of 11,042,331 units (each, a ñUnitò) of the Company at a subscription price of $0.26 per Unit, raising aggregate proceeds of $2,871,006. Each Unit consisted of one common share and one listed transferable common share purchase warrant with each warrant being exercisable for a two-year period from the date of issuance of the Units at a price of $0.35 per Share, if exercised prior to July 5, 2018, and at a price of $0.40 per Share thereafter.

In connection with the offering, the Company paid a corporate finance fee of $40,000, a cash commission of $287,100, other share issuance costs of $74,133 and granted 2,085,002 dealerõs options to acquire additional Units at a price of $0.26 for a period of two years valued using the Black-Scholes model at $338,305.

(xiii) On January 18, 2018, the Company issued 99,267 common shares at a price of $0.27 per share for a total value of $26,802 to settle debt of $30,723.

(xiv) On April 17, 2018 the Company issued 102,631 common shares at a price of $0.18 for a total value of $18,474 to settle debt of $19,500 and 75,000 common shares at a price of $0.18 for a total value of $13,500 as a bonus payable to an employee.

16. Share Capital (continued)

(b) Issued Share Capital (continued)

(xv) On June 18, 2018, the Company issued 9,300,000 common shares at a price of $0.145 for a total value of $1,348,500 to the former shareholders of Astra on the 100% acquisition of Astra (note 8).

17. Warrants

Details regarding warrants issued and outstanding are summarized as follows:

	Weighted average exercise price	Number of warrants
Balance - June 30, 2017	$0.56	2,046,667
Issuance of warrants	$0.38	26,200,834
Expired	$0.45	(596,667)
Balance - June 30, 2018	$0.39	27,650,834
Expired	$0.60	(1,450,000)
Balance ï March 31, 2019		26,200,834

The expiry of findersô and share purchase warrants are as follows:

	Exercise price	Number of warrants	Expiry date
Share purchase warrants	$0.40	5,786,030	September 5, 2019
Unit finderôs warrants(1)	$0.33	164,400	September 5, 2019
Share purchase warrants	$0.40	1,924,592	October 25, 2019
Unit finderôs warrants(2)	$0.33	45,560	October 25, 2019
Share purchase warrants	$0.40	6,486,921	November 27, 2019
Finderôs warrants	$0.40	1,000	November 27, 2019
Share purchase warrants	$0.40	11,042,331	January 5, 2020
Share purchase warrants	$0.25	750,000	June 29, 2020
		26,200,834	

(1) Each unit finderôs warrant includes the right to acquire one common share of the Company and one warrant additional exercisable at a price of $0.40.
(2) Each unit finderôs warrant includes the right to acquire one common share of the Company and one additional warrant exercisable at a price of $0.40.

18. Share-Based Payments

On January 22, 2015, the Company adopted an incentive stock option plan. Under the terms of this plan, the total number of share purchase options to be granted and outstanding may not exceed 10% 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.

18. Share-Based Payments (continued)

The changes in incentive share options outstanding are summarized as follows:

	Weighted average exercise price	Number of Options
Balance ï June 30, 2017	$0.34	3,065,150
Expired / Cancelled	$0.41	(259,000)
Exercised (weighted average share price of $0.34)	$0.11	(272,727)
Granted	$0.22	4,585,002
Balance ï June 30, 2018	$0.27	7,118,425
Cancelled	$0.40	(2,169,786)
Granted	$0.14	3,995,247
Balance ï March 31, 2019	$0.18	8,943,886

Incentive share options outstanding and exercisable March 31, 2019 are summarized as follows:

	Options Outstanding			Options Exercisable	
Exercise Price	Number of Shares Issuable on Exercise	Weighted Average Remaining Life (Years)	Weighted Average Exercise Price	Number of Shares Issuable on Exercise	Weighted Average Exercise Price
$0.11	363,637	0.81 years	$0.11	363,637	$0.11
$0.26	2,085,002	0.77 years	$0.26	2,085,002	$0.26
$0.19	100,000	2.07 years	$0.19	100,000	$0.19
$0.19	1,400,000	3.07 years	$0.19	1,400,000	$0.19
$0.16	1,000,000	3.19 years	$0.16	1,000,000	$0.16
$0.14	3,995,247(1)	3.54 years	$0.14	1,997,624	$0.14
	8,943,886		$0.18	6,946,263	$0.19

(1) Subsequent to the period ended March 31, 2019, 25,000 of these options were cancelled unexercised.

The weighted average fair value of options granted during the period ended March 31, 2019 was $0.07 (2018 - $0.16). Total share-based payments recognized in the statement of shareholdersô equity for the period ended March 31, 2019 was $261,904 (2018 - $108,006) for incentive options vested and was recognized in the profit or loss.

The fair value of options at the date of grant was estimated using the Black-Scholes Option Pricing Model using the following weighted average assumptions:

	March 31, 2019	June 30, 2018
Weighted average share and exercise price	$0.12	$0.13
Risk-free interest rate	2.37%	1.97%
Expected life of option	3.00 years	3.07 years
Expected annualized volatility	100%	91%
Expected dividend rate	Nil	Nil

19. Management of Capital

The capital managed by the Company includes the components of shareholdersô equity as described in the consolidated statements of shareholdersô equity. The Company is not subject to externally imposed capital requirements.

The Companyөs objectives of capital management are to create long-term value and economic returns for its shareholders. It does this by seeking to maximize the availability of funds for growth and development of its projects, and to support the working capital required to maintain its ability to continue as a going concern. The Company manages its capital structure and makes adjustments to it in light of changes in economic conditions and the risk characteristics of its assets, seeking to limit shareholder dilution and optimize its cost of capital while maintaining an acceptable level of risk. To maintain or adjust its capital structure, the Company considers all sources of finance reasonably available to it, including but not limited to issuance of new capital, issuance of new debt and the sale of assets in whole or in part. The Companyөs overall strategy with respect to management of capital at March 31, 2019 remains fundamentally unchanged from the year ended June 30, 2018.

20. Supplemental Cash Flow Information

During the period ended March 31, 2019, the Company:

a) settled $300,000 in loans payable through the issuance of a convertible note with $258,461 allocated to convertible notes and $41,539 to the equity component;
b) issued 330,000 common shares at a price of $0.105 per common shares, for a total of $34,650, to settle amounts owed to a director of the Company;
c) issued 400,000 common shares valued at $0.485 per common shares, for a total value of $194,000, of which $113,211 had previously been accrued to commitment to issue shares;
d) settled accounts receivable of $34,568 through the receipt of property and equipment with the same value; and
e) issued 210,000 common shares at a price of $0.11 per common share, for a total of $23,100 to settle amounts owed to a director of the Company.

During the period ended March 31, 2018, the Company:

a) issued 933,332 common shares at a price of $0.31 for a total value 294,000 to settle its previously accrued commitment to issues shares;
b) issued 2,611,714 common shares at a price of $0.295 for a total value of $770,456, to settle loans payable valued at $679,047;
c) issued 449,479 common shares valued at $124,746 to settled accounts payable valued at $125,384;
d) granted findersô warrants valued at $26,102 on private placements closed during the period;
e) granted dealerөs options valued at $338,305 on the rights offering closed during the period;
f) reclassified $17,236 from reserves to share capital on the exercise of options; and
g) issued 400,000 common shares at a price of $0.495 for a total value of $194,000 to acquire assets.

21. Related Party Transactions

The Company has entered into an executive consulting agreement with a company controlled by the President, CEO and director of the Company. Under the terms of the agreement, the Company will pay the company a total of $11,667 per month.

During the period ended March 31, 2019, the Company paid or accrued, to key management personnel and their related companies:

	Consulting Fees	Share-based payments	Total
Chief Executive Officer	$ 105,000	$ 61,160	$ 166,160
Chief Financial Officer	10,000	-	10,000
Former Chief Financial Officer	81,000	6,050	87,050
Non-executive Directors	50,000	67,575	117,575
Total	$ 246,000	$ 134,785	$ 380,785

21. Related Party Transactions (continued)

During the period ended March 31, 2018, the Company paid or accrued, to key management personnel and their related companies:

	Consulting Fees	Share-based payments	Total
Chief Executive Officer	$ 99,167	$ 4,630	$ 103,797
Former Chief Financial Officer	81,000	-	81,000
Non-executive Directors	68,500	21,070	89,570
Total	$ 248,667	$ 25,700	$ 274,367

Included in accounts payable and accrued liabilities is $241,805 (June 30, 2018 - $70,529) due to officers, directors, and a former officer of the Company.

On June 9, 2014, ETS signed a referral services agreement with RA Revenue Automation Inc. (ñRAò) 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 Companyôs CEO owns 10% of RA. Revenue of $72,450 (2017 - $48,300) recorded on the statement of comprehensive loss is from RA. As at March 31, 2019, $42,263 (June 30, 2018 - $42,263) 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 March 31, 2019, the Company earned sales revenue from KWL of $116,600 (2018 ï 104,422) and incurred expenses from KWL of $19,954 (2018 ï 14,899). Included in accounts receivable as at March 31, 2019 is a balance owing from KWL of $53,203 (June 30, 2018 - $88,862).

22. Commitments

The Company has entered into two operating lease contracts for office and production space. The future minimum payments under the leases as at March 31, 2019 are as follows:

2019	$ 41,211
2020	172,703
2021	183,025
2022	120,105
	$ 517,044

23. Financial Risk Management

Fair value of financial instruments

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

The Companyôs financial instruments consist of cash, accounts and other receivables, accounts payable and accrued liabilities, loans payable, and convertible note and are classified as amortized cost. The carrying values of these financial instruments approximate their fair values because of their nature and/or relatively short maturity dates or durations.

23. Financial Risk Management (continued)

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. At March 31, 2019 and June 30, 2018, the Company was not subject to significant market risk, except as noted below.

Foreign currency risk

As at March 31, 2019 the Canadian dollar equivalent carrying values of the financial assets and liabilities denominated in foreign balances are as follows:

	US Dollars		**Polish Zloty**	
March 31,	**2019**	**2018**	**2019**	**2018**
Financial Assets				
Cash	$ 16,632	$ 112,771	$ 41,929	$ 52,561
Accounts receivable	229,619	239,344	-	-
Financial Liabilities				
Accounts payable and accrued liabilities	$ 100,236	$ 95,432	$ 33,595	$ 42,280

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 nine months ended March 31, 2019, FlowWorks has revenue of $808,793 (2018 - $820,963) (Canadian dollar equivalent). A 10% change in the foreign exchange rate would result in a $81,000 (2018 - $82,000) (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. At March 31, 2019 and June 30, 2018, the Company was subject to interest rate risk with respect to its loans payable, some of which bear interest at a fixed rate and others are non-interest bearing, and convertible note, which bears 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 receivables. The Company holds cash at a major Canadian chartered bank in a chequing account, a Washington State, USA bank, and 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 56% of its trades account receivable is owing from four customers (June 30, 2018 – 43% from three customers), with more than 10% owing from one of those customers.

23. Financial Risk Management (continued)

Financial and capital risk management (continued)

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. 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 at March 31, 2019 of $9,394 (June 30, 2018 - $22,373).

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 Companyꞌs accounts payable are due within 30 to 60 days. The maturities of convertible note and loans payable are disclosed in notes 15 and 14, respectively. The Company has limited working capital at March 31, 2019 and will need to raise further financing to meet its financial obligations.

24. Segmented Information

The Company operates in three reportable segments, comprised of data services, data hosting, and digital currency verification, for which information is regularly reviewed by the Companyꞌs President and CEO, being the chief operating decision-maker. Revenue is earned in two main regions, being Canada and United States. The following is a breakdown of revenue by geographic areas based on each customersꞌ location for the nine months ended March 31:

		2019		2018
Revenue				
Canada	$	913,699	$	320,315
United States		337,784		573,098
	$	1,251,483	$	893,413

The following is a breakdown of the Companyꞌs revenues based upon reportable segment for the nine months ended March 31, 2019:

		2019		2018
Revenue				
Data services	$	881,243	$	893,413
Data hosting		351,580		-
Digital currency verification		18,660		-
	$	1,251,483	$	893,413

25. Subsequent Events

Subsequent to March 31, 2019, the Company:

a) obtained a loan of $60,000 from an armŝ length party repayable by December 31, 2019, bearing interest at a rate of 15% per annum;

b) obtained a loan of $115,000 from an armŝ length party repayable by December 31, 2019, bearing interest at a rate of 15% per annum; and

c) repurchased and returned to treasury 36,888 common shares at a price of US$0.225 per share pursuant to a settlement agreement entered with the former dissenting shareholder (note 5).

SCHEDULE B

SUPPLEMENTARY INFORMATION

[omitted]

SCHEDULE C

MANAGEMENT DISCUSSION AND ANALYSIS

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CARL DATA SOLUTIONS INC.

MANAGEMENT'S DISCUSSION & ANALYSIS
FOR THE THREE AND NINE MONTHS ENDED MARCH 31, 2019

General

This Managementôs Discussion and Analysis (ñ**MD&A**ò) of CARL Data Solutions Inc. (ñ**CARL**,ò or the ñ**Company**ò) is dated May 30, 2019 and provides a review of the Companyôs financial results, from the viewpoint of management, for the three and nine months ended March 31, 2019 (ñF2019-Q3ò) compared to the three and nine months ended March 31, 2018 (ñF2018-Q3ò).

The following information should be read in conjunction with the Companyôs audited consolidated financial statements with accompanying notes for the fiscal year ended June 30, 2018 (ñF2018ò), which were prepared in accordance with International Financial Reporting Standards (ñIFRSò).

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 ñforward-looking statementsò. When used in this document, the words ñmayò, ñwouldò, ñcouldò, ñwillò, ñintendò, ñplanò, ñproposeò, ñanticipateò and ñbelieveò, are intended to identify forward-looking statements. Such statements reflect the Companyôs ñforecastò, ñestimateò, ñexpectationò and similar expressions as they relate to the Companyôs 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 Companyôs 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. (ñ**CARL**ò or the ñ**Company**ò) was incorporated under the Business Corporations Act (British Columbia) on January 17, 2014. CARL is a developer of Big-Data-as-a-Service (ñ**BDaaS**ò)-based solutions, providing the next generation data collection, storage and analytic solutions for data-centric companies.

CARL is a public company that is listed on the Canadian Securities Exchange (ñ**CSE**ò) (under the symbol: CRL), the Frankfurt Stock Exchange (under the symbol: 7C5) and the OTC Pink (under the symbol: CDTAF). The head office and principal address of the Company is located at Suite 488 ï 1090 West Georgia Street, Vancouver, British Columbia, V6E 3V7. The Companyôs consolidated financial statements include the financial statements of the following subsidiaries:

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

CARL has spent the past year identifying, closing and integrating the Astra subsidiary into the core business which has been mainly the operations of FlowWorks. The strategy has been to build the internal development team to create the software platforms and build a world class technology team to create the Infrastructure as a service layer including data center assets. This team has been sourced across three continents to attract the best talent available. CARL now has all the elements in place to successfully take on the Industrial Internet of things (ñ**IIoT"**) space as required for smart cities.

The combined capabilities of the teams allow the Company to respond to the demands and visions of individual utilities within a smart city environment delivering smart water and waste solutions that not only harness 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.

This unique platform has now been adopted by numerous cities across the US and Canada and is performing well, collecting enormous data sets from CARLŒs own IIoT sensors and a myriad of third-party end point devices. Embedded within the platform is an anomaly detector that sifts out the erroneous or irrelevant data points that can easily create false negatives and mislead decision making. The clean and relevant data is then analysed, overlaying predictive artificial intelligence then presenting the new, real time data in an easy to interpret dashboard for rapid and collaborate decision making.

The addressable markets of water and waste are significant but with its new technology agnostic data gathering, analytics and artificial intelligence engine, the Company is in a good position for strong growth in the smart city and building sector.

Going Concern

The CompanyŒs consolidated 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 these audited consolidated financial statements. The CompanyŒs 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. At March 31, 2019, the Company had not achieved profitable operations, had accumulated a deficit of $16,145,867 since inception and expects to incur further operating losses in the development of its business. The CompanyŒs 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 matters indicate material uncertainties that may cast significant doubt about the CompanyŒs ability to continue as a going concern.

Recent Events & Overall Performance

Completed Private Placements and share issuances

During and subsequent to the period ended March 31, 2019, the Company had the following share transactions:

(i) On August 31, 2018, the Company repurchased and returned to treasury 184,440 common shares at a price of US$0.225 per share pursuant to a settlement agreement entered with the former dissenting shareholder.

(ii) On October 22, 2018, the Company issued 330,000 common shares at a price of $0.105 per common share, for a total value of $34,650, to settle accounts payable with a director of $33,000. The Company recognized a loss of $1,650 on the settlement to the loss for the period.

(iii) On October 22, 2018, the Company issued 214,285 common shares at a price of $0.105 per common share, for a total value of $22,500, to settle finance fees on a short-term loan previously accrued at $30,000. The Company recognized a gain of $7,500 on the settlement to the loss for the period.

(iv) On November 30, 2018, the Company issued 400,000 common shares at a price of $0.485 per common shares, for a total value of $194,000, as required per the acquisition of the AB Embedded assets.

(v) On December 19, 2018, the Company repurchased and returned to treasury 36,888 common shares at a price of US$0.225 per share pursuant to a settlement agreement entered with the former dissenting shareholder.

(vi) On January 14, 2019, the Company repurchased and returned to treasury 36,888 common shares at a price of US$0.225 per share pursuant to a settlement agreement entered with the former dissenting shareholder.

(vii) On February 20, 2019, the Company issued 210,000 common shares at a price of $0.11 per common share to a director of the Company in settlement of $31,500 of accounts payable.

(viii) On April 24, 2019, the Company repurchased and returned to treasury 36,888 common shares at a price of US$0.225 per share pursuant to a settlement agreement entered with the former dissenting shareholder.

Acquisition of Astra

On June 18, 2018, the Company completed its 100% acquisition of Astra, by issuing 9,300,000 common shares of the Company, valued at $1,348,500, to the former shareholders of Astra. This acquisition is consistent with the CompanyÕs corporate growth strategy to build and acquire applications that assist in the collection, storage and analysis of large volumes of information for data centric companies. Astra is a technology company with multiple potential revenue streams including data center hosting, big data analytical services, and the manufacture of devices for the Industrial Internet of Things.

Short-Term Loans

During and subsequent to the nine-month period ended March 31, 2019, the Company entered into the following loan agreements:

a) $300,000 from an armÕs-length party with a maturity of September 13, 2018. In connection with the loan, the Company agreed to pay interest of $15,000 and issue 214,285 common shares on maturity (issued). Additional interest is payable on the loan amount at the rate of $15,000 for any and every part of 59 days that the loan is outstanding after the maturity. The Company settled the principal of $300,000 during the nine-month period ended March 31, 2019 through the issuance of a convertible note in the same amount;

b) $100,000 from an armÕs-length party with a maturity of January 26, 2019. In connection with the loan the Company agreed to pay a transaction fee of $5,000 and issue 64,516 common shares. Since the loan was not repaid by January 26, 2019, interest of 13% per annum is accruing on the principal amount of $100,000. As at March 31, 2019, $10,000 relating to the common shares has been accrued to commitment to issue shares and $5,000 in transaction fees has been included in the balance of loans payable;

c) $50,000 from an armÕs-length party, repayable on demand and non-interest bearing;

d) $90,000 from two directors of the Company with maturities of January 31, 2019. In connection with the loans, the Company will pay 20% simple interest per annum after the maturity date;

e) $225,000 from an armÕs-length party bearing interest of 2.5% + prime on a monthly basis. After 24 months, the Company will make monthly payments over 60 months inclusive of principal and interest components;

f) $60,000 from an armÕs length party repayable by December 31, 2019, bearing interest at a rate of 15% per annum; and

g) $115,00 from an armÕs length party repayable by December 31, 2019, bearing interest at a rate of 15% per annum.

Convertible notes

During and subsequent to the nine-month period ended March 31, 2019, the Company issued the following convertible notes:

a) $300,000 issued on December 24, 2018, bearing interest at a rate of 12% per annum and maturing on December 24, 2019. The principal and interest, at the option of the holder, will be convertible into common shares of the Company at a conversion price of $0.15 per common share;

b) $300,000 issued on December 27, 2018 in settlement of loans payable, bearing interest at a rate of 12% per annum and maturing on December 27, 2019. The principal and interest, at the option of the holder, will be convertible into common shares of the Company at a conversion price of $0.15 per common share; and

c) $70,000, bearing interest at a rate of 10% per annum and maturing on July 28, 2019. The principal and interest, at the option of the holder, will be convertible into common shares of the Company at a conversion price of $0.15 per common share. The Company allocated $6,087 to the equity component of the note; and

d) $60,000, bearing interest at a rate of 10% per annum and maturing on July 28, 2019. The principal and interest, at the option of the holder, will be convertible into common shares of the Company at a conversion price of $0.15 per common share. The Company allocated $5,217 to the equity component of the note.

Granting of Stock options

On January 22, 2015, the Company adopted an incentive stock option plan. Under the terms of this plan, the total number of share purchase options to be granted and outstanding may not exceed 10% 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 nine-month period ended March 31, 2019, the Company had the following stock option issuances:

(i) On September 14, 2018, the Company cancelled the following options:

- (i) 919,600 expiring January 12, 2021 with an exercise price of $0.40;
- (ii) 565,247 expiring August 24, 2021 with an exercise price of $0.45; and
- (iii) 684,939 expiring March 20, 2022 with an exercise price of $0.36.

(ii) On October 15, 2018, the Company granted 3,995,247 stock options to various directors, officers, employees, and consultants with a life of four years and an exercise price of $0.14.

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:

	March 31, 2019	December 31, 2018	September 30, 2018	June 30, 2018
Revenue	$ 334,801	$ 450,220	$ 466,462	$ 365,499
Operating expenses	1,054,703	1,247,536	1,364,275	1,393,741
Loss for the period	(719,902)	(808,207)	(929,643)	(630,573)
Basic and Diluted Loss per share	(0.01)	(0.01)	(0.01)	(0.01)
Assets	3,383,664	3,755,001	3,786,595	4,385,604
Liabilities	1,985,785	1,708,767	1,285,729	987,015
Shareholdersô Equity	1,397,879	2,046,234	2,500,866	3,398,589

	March 31, 2018	December 31, 2017	September 30, 2017	June 30, 2017
Revenue	$ 280,808	$ 250,076	$ 362,529	$ 379,370
Operating expenses	981,772	2,418,821	1,239,247	1,642,587
Loss for the period	(697,639)	(2,173,793)	(1,272,664)	(1,293,221)
Basic and Diluted Loss per share	(0.01)	(0.04)	(0.03)	(0.03)
Assets	2,925,440	1,681,410	1,435,275	1,423,721
Liabilities	798,921	1,898,047	1,125,277	1,645,625
Shareholdersô Equity (Deficiency)	2,126,519	(216,637)	309,998	(221,904)

Discussion of Operations

Revenue

For the nine-month period ended March 31, 2019, the Company generated $1,251,483 in revenues (2018 - $893,413) of which $808,793 (2018 - $820,963) related to revenue generated by FlowWorks, $72,450 (2018 - $72,450) related to revenue generated by ETS and $351,580 related to revenue generated by Astra (2018 - $nil). 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 comparable for FlowWorks included custom programming fees for a one-time project, and accordingly, the Company saw a decrease in revenues from FlowWorks. The overall increase in revenues is primarily a result of additional revenue generated from data hosting services which commenced with the acquisition of Astra on June 18, 2018.

Operating Expenses and Other Items

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

Amortization

Amortization for the nine-month period ended March 31, 2019 was $574,791 (2018 Ð $199,799). During the year ended June 30, 2018, on the business combinations of AB Embedded and Astra, the Company acquired five new finite life intangible assets which are to be amortized over periods of three or four years. The amortization expense for the nine-month period ended March 31, 2019 captures the new amortization for intangibles from acquisition plus amortization of previously acquired FlowWorks assets. Further, late in the year ended June 30, 2018, the CompanyÕs previously identified software in development became available for use and the Company started amortizing it from January 1, 2018.

Computer Hosting Costs

Computer hosting costs for the nine-month period ended March 31, 2019 were $247,417 (2018 Ð $211,198). The additional hosting costs were incurred as a result of running the CompanyÕs new platform in tandem with its former and management does not expect these to persist in the future.

Consulting fees

Consulting fees for the nine-month period ended March 31, 2019 were $726,532 (2018 Ð $585,862). Consulting fees are primarily used for contracts with software developers and for management and movement between the two periods is considered reasonable considering the addition of staff in the Astra business unit. During the nine-month period ended March 31, 2019, the Company recognized $80,789 for shares issued on the one-year anniversary of the AB Embedded business combination, which explains a significant portion of the change.

Depreciation

Depreciation for the nine-month period ended March 31, 2019 was $166,267 (2018 Ð $11,347). On November 30, 2017, the Company acquired tangible assets through the business combinations of AB Embedded and Astra and paid $250,000 for the acquisition of processors to be used for digital currency verification services for which the Company started recognizing depreciation.

Energy Costs

Energy costs for the nine-month period ended March 31, 2019 were $204,793 (2018 - $nil). Late in the year ended June 30, 2018, the Company completed the acquisition of Astra and started providing data hosting services. In performing these services, the Company now incurs significant energy costs which it expects will increase as the Company further develops its data hosting offerings.

Interest and Penalties

Interest and penalties for the nine-month period ended March 31, 2019 were $70,407 (2018 Ð $69,158) which are considered comparable between the two periods.

Investor Relations

Investor relations expense for the nine-month period ended March 31, 2019 was $93,808 (2018 Ð $1,925,513). During the comparative period, the Company entered into multiple investor relations contracts in advance of its rights offering for a large-scale short-term investor relations campaign. The Company does not expect these costs to persist and is focusing on reducing its investor relations expenditures.

Office and miscellaneous

Office and miscellaneous costs for the nine-month period ended March 31, 2019 were $130,742 (2018 Ð $126,145). The Company experienced significant growth during the year ended June 30, 2018 with the business combinations of AB Embedded, Carl PL, and Astra, and therefore an increase in office and miscellaneous costs is expected.

Professional fees

Professional fees for the nine-month period ended March 31, 2019 were $183,552 (2018 Ð $214,024). Professional fees include audit and accounting fees and legal fees and are considered comparable to the prior period.

Share-based payments

Share-based payments for the nine-month period ended March 31, 2019 were $261,904 (2018 Ð $108,006). The expense relates primarily to stock options granted and vested during the period and are not expected to be comparable over the three periods as the expense is dependent on the timing of grants and vesting schedules.

Salaries and wages

Salaries and wages for the nine-month period ended March 31, 2019 were $636,397 (2018 Ð $730,030). The decrease in salaries and wages is primarily a result of a grant received during the period to cover salaries for Carl PL.

Travel

Travel expenses for the nine-month period ended March 31, 2019 were $76,035 (2018 Ð $121,113). The decrease in travel is a result of management initiatives to reduce overall expenditure to conserve working capital.

Financing Costs

Financing costs for the nine-month period ended March 31, 2019 were $45,000 (2018 Ð $292,028). Financing costs in the comparable period related exclusively to royalties paid and fully satisfied on the CompanyÕs convertible debenture, which was primarily settled through the issuance of 1,119,316 common shares of the Company valued at $291,022. Current period financing fees include transaction fees on two loans obtained during the period.

Gain on settlement of debt

Gain on settlement of debt for the nine-month period ended March 31, 2019 was $14,250 (2018 Ð loss of $105,641) and is a result of a difference in the fair value of share prices used to settle accounts payable and finance costs accrued.

Operating Activities and Plans

Company Structure

After the successful acquisition of Astra Smart System, the Company has been divided into 3 complimentary business units based in Trail (Canada), Burnaby (Canada), and Gdansk (Poland);

1) Hardware research and development are based in Trail, BC where the Company is actively pursuing grants to complete specialty components that will help secure data services contracts with existing and new customers.
    - The Trail facility has the perfect production and lab space to test and produce products that are desperately needed in building IIoT and smart city infrastructure.
    - The geographic location also provides the Company with access to funding through several regional economic diversity organizations that provide grants for the work CARL does.
    - Adding hardware and telemetry solutions to the CompanyÕs product offering provides true end to end solutions for the CompanyÕs clients.

2) Data Science is based in Gdansk, Poland. Gdansk has a large pool of extremely well-educated engineers and statisticians who build and release the advanced features in the applications that the Company provides to its clients.
    - The group has successfully completed a key piece of infrastructure that will allow very advanced statistical modelling tools to be used not only in the applications that CARL produces, but these can also be consumed by customers through a web service. This allows the features to be used in other applications and allows the Company to charge for services on a transaction basis. Since this model does not include user interface development, it has a high profit margin.
    - Because artificial intelligence, machine learning and other statistical services are now separated from application development, The Gdansk group can operate without dependency on the Software as a Solution (Ò**SaaS"**) based application developers which decreases the time needed to get advanced features to market.

3) Application Development is based in the Burnaby head office. In Burnaby the Company has a talented group of software engineers who continue to improve and expand on its core SaaS based application, FlowWorks.
    - The application has been significantly upgraded to allow inclusion of governments or companies with extremely high volumes of data to be accommodated.
    - Nearly unlimited cloud-based scalability means there are no ceilings for the size and number of clients that the Company can target.
    - The Companyôs developers have ensured that the platform can accommodate all types of time series data from virtually any device or data source. From images to stream flow to slope stability, FlowWorks can handle all of it.
    - The updates allow the Company to pursue a variety of clients from different industry verticals.

Moving Forward

CARL is actively targeting clients in many industrial market verticals. As IIoT explodes with new devices producing data, CARL is ready to be the go-to platform for data storage and analysis. The Company anticipates enormous growth in the ñSmart Citiesò market, with aging infrastructure, cities, mines, and utilities are scrambling to get a better idea of where upgrades and improvements are required. CARLôs platform provides answers in real-time to decision makers who need to make decisions on capital projects. The Companyôs predictive analytics features can help identify events that may significantly impact valuable assets. By including hardware into the product mix, CARL is ready to deliver cost effective end-to-end solutions to a massive emerging market.

Liquidity and Capital Resources

During the nine-month period ended March 31, 2019 the Companyôs operating activities required $670,320 (2018 ï $3,807,977) in cash stemming primarily from the net loss for the period and have decreased from the comparable period as the prior year required cash for a large investor relations program that commenced in November 2017.

The Companyôs cash as at March 31, 2019 was $97,122 (June 30, 2018 - $247,795) and the Companyôs working capital deficiency was $942,366 (June 30, 2018 ï working capital of $146,199).

Financing Activities

During the nine-month period ended March 31, 2019, the Company generated $526,659 from financing activities (2018 - $5,214,229). A total of $765,000 was generated through the short term loans (2018 ï 609,140), $430,000 from the issuance of convertible notes (2018 - $nil), and $7,829 in proceeds from the sale of digital currencies, less $600,000 (2018 ï $394,060) incurred in repayment of loans and $76,170 (2018 - $nil) on the repurchase of common shares. During the comparative period, the Company generated $4,999,149 in proceeds from share issuances and stock option exercises.

Investing Activities

During the nine-month period ended March 31, 2019, the Companyôs investing activities required $6,769 (2018 - $249,891) related to the acquisition of property and equipment ($250,000). During the comparative period, the Company generated $109 from the acquisition of a subsidiary.

Capital Structure

As at the date of this MD&A, the Company has 76,734,510 common shares, 26,200,834 warrants, and 8,918,886 stock options outstanding.

Financial Instruments and Risk Management

Fair value of financial instruments

The Company classifies 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:

Å Level 1 ï Quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.

- Level 2 Ð Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3 Ð Unobservable inputs for the asset or liability.

The CompanyÕs financial instruments consist of cash, accounts and other receivables, accounts payable and accrued liabilities, loans payable, and convertible note and are classified as amortized cost. The carrying values of these financial instruments approximate their fair values because of their nature and/or relatively short maturity dates or durations.

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 CompanyÕs 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 CompanyÕs 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. At March 31, 2019 and June 30, 2018, the Company was not subject to significant market risk, except as noted below.

Foreign currency risk

As at March 31, 2019 the Canadian dollar equivalent carrying values of the financial assets and liabilities denominated in foreign balances are as follows:

	US Dollars		Polish Zloty	
	2019	**2018**	**2019**	**2018**
Financial Assets				
Cash	$ 16,632	$ 112,771	$ 41,929	$ 52,561
Accounts receivable	229,619	239,344	-	-
Financial Liabilities				
Accounts payable and accrued liabilities	$ 100,236	$ 95,432	$ 33,595	$ 42,280

The CompanyÕs subsidiary, FlowWorks, operates in the United States which, from the perspective of the Company, creates currency risk associated with those operations. FlowWorks has revenue of $808,793 (2018 - $820,963) (Canadian dollar equivalent). A 10% change in the foreign exchange rate would result in a $81,000 (2018 - $82,000) (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 CompanyÕs interest rate risk mainly arises from changes in the interest rates on cash. Cash generates interest based on market interest rates. At March 31, 2019 and June 30, 2018, the Company was subject to interest rate risk with respect to its loans payable, some of which bear interest at a fixed rate and others are non-interest bearing, and convertible note, which bears interest at a fixed rate.

Credit Risk

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

The Company is exposed to credit risk on its trade accounts receivable. The CompanyÕs credit risk for accounts receivable is concentrated as 56% of its trades account receivable is owing from four customers (June 30, 2018 Ð 43% from three customers), with more than 10% owing from one of those customers.

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. 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 at March 31, 2019 of $9,394 (June 30, 2018 - $22,373).

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 Companyôs accounts payable are due within 30 to 60 days. The Company has limited working capital at March 31, 2019 and will need to raise further financing to meet its financial obligations.

Off-Balance Sheet Arrangements

The Company has no off-balance sheet arrangements.

Related Party Transactions

The Company has entered into an executive consulting agreement with a company controlled by the President, CEO and director of the Company. Under the terms of the agreement, the Company will pay the company a total of $11,667 per month.

During the nine month period ended March 31, 2019, the Company paid or accrued, to key management personnel and their related companies:

	Consulting Fees	Share-based payments	Total
Chief Executive Officer	$ 105,000	$ 61,160	$ 166,160
Chief Financial Officer	10,000	-	10,000
Former Chief Financial Officer	81,000	6,050	87,050
Non-executive Directors	50,000	67,575	117,575
Total	$ 246,000	$ 134,785	$ 380,785

During the nine month period ended March 31, 2018, the Company paid or accrued, to key management personnel and their related companies:

	Consulting Fees	Share-based payments	Total
Chief Executive Officer	$ 99,167	$ 4,630	$ 103,797
Former Chief Financial Officer	81,000	-	81,000
Non-executive Directors	68,500	21,070	89,570
Total	$ 248,667	$ 25,700	$ 274,367

Included in accounts payable and accrued liabilities is $241,805 (June 30, 2018 - $70,529) due to officers, directors, and a former officer of the Company.

On June 9, 2014, ETS signed a referral services agreement with RA Revenue Automation Inc. (ñRAò) 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 Companyôs CEO owns 10% of RA. Revenue of $72,450 (2018 - $48,300) recorded on the statement of comprehensive loss is from RA. As at March 31, 2019, $42,263 (June 30, 2018 - $42,263) 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 March 31, 2019, the Company earned sales revenue from KWL of $116,600 (2018 ï 104,422) and incurred expenses from KWL of $19,954 (2018 ï 14,899). Included in accounts receivable as at March 31, 2019 is a balance owing from KWL of $53,203 (June 30, 2018 - $88,862).

Proposed Transactions

The Company has no specific proposed transactions.

Subsequent Events

Subsequent to March 31, 2019, the Company:

a) obtained a loan of $60,000 from an armÕs length party repayable by December 31, 2019, bearing interest at a rate of 15% per annum;

b) obtained a loan of $115,000 from an armÕs length party repayable by December 31, 2019, bearing interest at a rate of 15% per annum; and

c) repurchased and returned to treasury 36,888 common shares at a price of US$0.225 per share pursuant to a settlement agreement entered with the former dissenting shareholder.

Critical Accounting Estimates

The effect of a change in an accounting estimate is recognized prospectively by including it in profit or loss in the year 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 FlowWorks, Astra, Carl PL, and AB Embedded. The valuation of intangible assets requires management to use valuation techniques to assess the fair values of assets and liabilities acquired at acquisition date. The Company used its judgment to select methods and makes assumptions that reflected market conditions as at the acquisition dates.

Income tax

The determination of income tax is inherently complex and requires making certain estimates and assumptions about future events. While income tax filings are subject to audits and reassessments, the Company has adequately provided for all income tax obligations. However, changes in facts and circumstances as a result of income tax audits, reassessments, jurisprudence and any new legislation may result in an increase or decrease in the CompanyÕs provision for income taxes.

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

IFRS 9 Financial Instruments

IFRS 9 sets out requirements for recognizing and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items. This standard replaces IAS 39 Financial Instruments: Recognition and Measurement (ÒIAS 39Ó).

The Company has adopted IFRS 9 retrospectively as of July 1, 2018. Changes in accounting policies resulting from the adoption of IFRS 9 do not have a material impact on the CompanyÕs consolidated financial statements.

Classification and measurement of financial assets and financial liabilities

IFRS 9 replaces the guidance in IAS 39, on the classification and measurement of financial assets. IFRS 9 eliminates the existing IAS 39 categories of held-to-maturity, available-for-sale and loans and receivable.

Financial assets will be classified into one of two categories on initial recognition:

- Financial assets measured at amortized cost; or
- Financial assets measured at fair value.

The classification of financial assets under IFRS 9 is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. A financial asset (unless it is a trade receivable without a significant financing component that is initially measured at the transaction price) is initially measured at fair value plus, for an item not at fair value through profit or loss, transaction costs that are directly attributable to its acquisition. For financial assets measured at amortized cost, these assets are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.

The Companyôs financial assets previously carried as loans and receivables are now classified as amortized cost without material impact to carrying values.

Impairment of financial assets

IFRS 9 replaces the óincurred lossô model in IAS 39 with an expected credit loss (ñECLò) model. Using the simplified approach for trade receivables, the Company will measure loss allowances for trade and other receivables at an amount equal to lifetime ECLs. ECLs are a probability-weighted estimate of credit losses.

Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets. Impairment losses on trade and other receivables are presented as bad debts expense in the statement of loss and comprehensive loss, similar to the presentation under IAS 39.

The Company has determined that the application of IFRS 9ôs impairment requirements as at July 1, 2018 does not result in any additional impairment allowances.

IFRS 15 Revenue from Contractors with Customers

IFRS 15 was issued with the intent of significantly enhancing consistency and comparability of revenue recognition practices across entities and industries. IFRS 15 replaces IAS 18 Revenue, IAS 11 Construction Contracts and related interpretation. The new standard establishes a single, principles-based five-step model to be applied to all contracts with customers and introduces new and enhanced disclosure requirements.

The Company has adopted the modified retrospective approach which allows the cumulative impact of the adoption to be recognized in retained earnings as of July 1, 2018 and that the comparative figures will not be restated. Changes in accounting policies resulting from the adoption of IFRS 15 do not have a material impact on the Companyôs consolidated financial statements.

Revenue recognition

The Company earns revenue from the provision of digital currency verification services and in its subsidiaries, FlowWorks, ETS, and Astra through the performance of services revenue and data center hosting.

i. Services revenue

Services revenue includes custom programming service contracts, data services through software subscription revenue, and the supply of social referral software to clients. Services revenue is measured at the fair value of the consideration received or receivable for services, net of discounts and sales taxes. Consideration received from customers in advance is recorded as deferred revenue. Services revenue is recognized as the Company satisfies its performance obligation over time.

ii. Data center hosting

Revenue from data center hosting at the fair value of the consideration received or receivable for services, net of discounts and sales taxes and is recognized as the Company satisfies its performance obligation over time.

iii. Digital currency verification services

The Company provides transaction verification services within digital currency networks, for which it receives digital currency from each specific network as consideration. Revenue is measured based on the fair value of the coins received. The fair value is determined using the closing spot price of the coin on the date of receipt, based on prices available on www.cryptocompare.com. The coins are recorded on the statement of financial position, as digital currencies, at their fair value and re-measured at each reporting date. Revaluation gains or losses, as well as gains or losses on the sale of coins for traditional (fiat) currencies are included in profit and loss in accordance with the Companyģs treatment of its digital currencies as a traded commodity.

There is currently no specific definitive guidance in IFRS or alternative accounting frameworks for the accounting for the mining and strategic selling of digital currencies and management has exercised significant judgment in determining the appropriate accounting treatment for the recognition of revenue for mining of digital currencies. Management has examined various factors surrounding the substance of the Companyģs operations, including the stage of completion being the completion and addition of a block to a blockchain and the reliability of the measurement of the digital currency received.

Future Changes in Accounting Policies

At the date of this MD&A, the IASB and IFRIC have issued the following new and revised standards, amendments and interpretations which are not yet effective during the period ended March 31, 2019:

IFRS 16 Leases

IFRS 16 replaces IAS 17 ï Leases and requires lessees to account for leases on the statement of financial position by recognizing a right to use asset and lease liability. The standard is effective for annual reports beginning on or after January 1, 2019, with earlier adoption permitted. The Company is currently evaluating the impact of the application of this standard.

Risk Factors

The following are major risk factors management has identified which relate to the Companyģs 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 March 31, 2019 of $16,145,867. 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 Companyģs profitability. Should these conditions continue to prevail, there will be further pressure on the Companyģs profitability.

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 a previously unavailable service. 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 on agencies that the Company partners with along with their end customers.

Customer Risks

The Company is dependent on proper pricing of products, 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 Companyǿs 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 Companyǿs 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 to occur, the Companyǿs 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 Companyǿs 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 Companyǿs 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 Companyĝs 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 Companyĝs 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 Companyĝs business, financial condition, liquidity and results of operations.

Available Workforce

The Companyĝs continued success will depend on the performance and continued service of the Companyĝs 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.