

For the Year Ended December 31, 2018

Introduction

This Management Discussion and Analysis ("MD&A") provides information that management believes is relevant to an assessment and understanding of the Company's consolidated results of operations and financial condition. This discussion should be read in conjunction with the Consolidated Financial Statements for the years ended December 31, 2018 and 2017 and the accompanying notes, which are prepared in accordance with International Financial Reporting Standards or "IFRS". This discussion is based on information available to management as of March 18, 2019, unless otherwise indicated.

Unless otherwise indicated, all dollar amounts are expressed in Canadian dollars.

The core business of the Company is to provide advanced technology biological filters for removal of odors, volatile organic compounds (VOCs), hazardous air pollutants (HAPs) and for the conditioning of biogas renewable energy. With over 1,200 installed systems and over a decade of experience, the Company's groundbreaking biofilters are the technology of choice for wastewater treatment plants across North America. Additional information about the Company, including our most recently filed Annual Report, is available on SEDAR at www.sedar.com.

Forward Looking Statements

Certain statements in this report may contain "forward looking" statements that involve risks, uncertainties and other factors that may cause the actual results, performance or achievements of the Company or industry to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Words such as "may", "will", "expect", "believe", "plan", "intend", "should", "anticipate" and other similar terminology are used to identify forward looking statements. These statements reflect current assumptions and expectations regarding future events and operating performance and speak only as of the date of this MD&A, March 18, 2019. Forward looking statements involve significant risks and uncertainties, should not be read as guarantees of future performance or results, and will not necessarily be accurate indications of whether or not such results will be achieved. A number of factors could cause actual results to vary significantly from the results discussed in the forward looking statements, including, but not limited to, the factors discussed under "Risks and Uncertainties". Although the forward looking statements contained in this MD&A are based upon what management of the Company believes are reasonable assumptions, the Company cannot assure investors that actual results will be consistent with these forward looking statements. These forward looking statements are made as of the date of this MD&A and the Company assumes no obligation, except as required by law, to update any forward looking statements to reflect new events or circumstances.

Non-IFRS Measures

“EBITDA,” “Order Bookings,” “Order Backlog” and “Working capital” do not have any standardized meaning prescribed by IFRS and may not be comparable to measures presented by other companies.

EBITDA is used to denote earnings (loss) from operations before interest, income taxes, depreciation and amortization. This measure is important to the Company since it is used by potential investors and lenders to evaluate the ongoing cash generating capability of the Company and thus the amounts they are willing to invest and lend to the Company.

Order Bookings and Order Backlog are non-IFRS measures that the Company uses to evaluate its sales performance. Order Bookings are those binding contracts that the Company enters into during a fiscal year with a third party for the delivery of our products or services. As Order Bookings are received, the contract value (before any associated sales taxes) is included in the Order Backlog. The Order Backlog is reduced by the revenue that is recognized on each project and is also adjusted for foreign exchange changes in the period presented.

Overview

Biorem is a leading clean technology company that designs, manufactures and distributes a comprehensive line of high-efficiency emissions control systems used to eliminate odors, volatile organic compounds (VOCs) and hazardous air pollutants (HAPs). Biorem also offers Biogas Conditioning technologies specializing in biological treatment of hydrogen sulfide.

Biorem offers a selection of products that can be tailored to suit application specific requirements. Biorem ensures optimized long-term performance on every application by custom-designing systems to meet the individual needs of their clients.

Biorem has sales and manufacturing offices across North America and in China, a dedicated research facility, an analytical and microbial laboratory, a worldwide sales representative network, and a dedicated service and support division. As a result, Biorem has the resources available to ensure that projects are handled promptly and professionally from conception to completion.

The Company has more than 1,200 installed systems worldwide.

Significant Achievements For Fiscal 2018

Key events of note in 2018 include the following:

- Revenues for the year exceeded \$24 million
- Net earnings for the year were \$4.7 million
- Basic and diluted earnings per share were \$0.12
- Bookings for the year were \$25.5 million
- Order backlog at the end of the year stood at \$21.8 million
- Working capital increased to \$9.7 million from \$7.2 million on December 31, 2017.
- Shareholders' equity increased to \$12.9 million

Selected Annual Information

	2018	2017	2016
Revenue	\$24,333,000	\$22,558,000	\$15,896,000
Net earnings	4,666,000	1,530,000	547,000
Total Assets	21,048,000	15,662,000	11,343,000
Current portion LTD	-	-	2,166,000
Shareholders' Equity	12,895,000	7,299,000	2,427,000
Earnings(loss)per share			
- basic	\$0.12	\$0.04	\$0.04
- diluted	\$0.12	\$0.04	\$0.02

Operating Results

Revenue	2018	2017	Percent Change
	\$24,333,000	\$22,558,000	7.9%

Revenue by Geography

	2018	2017	2016
Canada	\$3,216,000	\$5,488,000	\$6,897,000
United States	14,448,000	14,169,000	5,031,000
China	3,889,000	1,066,000	687,000
Other international	2,780,000	1,835,000	3,281,000
Total Revenue	24,333,000	22,558,000	\$15,896,000

Biorem's core market is the North American municipal odour control market with international distribution established in China, Middle East, Americas and South Africa as well as opportunistically in other jurisdictions. Project delivery mix varies from period to period, however overall the Company relies heavily on the American and Canadian markets to generate revenue. The geographic mix in the current Order Backlog of the Company is consistent with the geographic mix for 2018 shown in the above table.

A number of factors contribute to variations in the Company's period over period results: customer scheduling and delivery of our products, the Company's mix of product and service offerings, the currency in which the revenue is earned and the timing of revenue recognition.

2018 Revenue increased by 7.9% or \$1.8 million over 2017 largely as a result of the larger order backlog at the beginning of the year and an increase in bookings in 2018 compared to 2017. Revenue from Canadian projects was down \$2.3 million to \$3.2 million compared to the previous year while revenue from projects in China was up by \$2.8 million to \$3.9 million and revenue from projects in the United States stayed relatively constant at \$14.4 million.

In 2018 fifty three percent of revenue was derived from eight customers while in 2017 forty nine percent of revenues came from nine customers.

Order Bookings	2018	2017	Percent Change
	\$25,500,000	\$21,860,000	16.7%

Order Bookings can vary considerably from period to period, due to both the size of the contracts won and the timing of the awarding of the contracts. Bookings in 2018 increased by \$3.6 million dollars from the Company's 2017 bookings. The increase in bookings came from Canada, the United States and China. 2018 order bookings were achieved consistently throughout the year with \$12.3 million of orders booked in the first half of the year and \$13.2 million in the second half.

Order Backlog	2018	2017	Percent Change
	\$21,801,000	\$18,876,000	15.5%

The Company's Order Backlog at December 31, 2018 increased by \$2.9 million to \$21.8 million from the same measurement date a year ago. Order Backlog can vary significantly from period to period both due to the timing of the receipt of contracts and due to the completion date of the projects under contract. The increase in Order Backlog at December 31, 2018 compared to December 31, 2017 is primarily due to the increase in bookings in 2018 compared to 2017. Orders booked in the first half of the year are more likely to be delivered in the same year and removed from backlog by December 31. Due to customer scheduling, the Company cannot provide guidance as to the quarters when the Order Backlog will be converted into revenue. Management's current estimate is that the majority of the Order Backlog at December 31, 2018 will be realized as revenue by the end of fiscal 2019.

Gross Profit	2018	2017	Percent Change
	\$6,378,000	\$6,270,000	1.7%

Costs of goods sold is comprised of 2 main components; direct material costs that are in direct proportion to revenue recognized, and the cost of operations which includes engineering and project management costs that are relatively fixed.

Gross profit in 2018 increased by \$108,000 to \$6.4 million compared to \$6.3 million recorded in 2017.

This increase in gross profit for the year was primarily due to the increase in revenues in 2018. As a percentage of revenue, gross profit in 2018 was 26.2% compared to 27.8% in 2017. Gross profit before the fixed costs of engineering and project management as a percentage of revenue was 38% compared to 40% in 2017. The 2% decline in gross profit was partly due to a onetime \$600,000 provision recorded in 2018 for a project under dispute with regards to delay damages which the Company believes are unfounded. Project management and engineering costs represented 11.6% of revenue in 2018 compared to 11.4% in 2017.

Sales and Marketing	2018	2017	Percent Change
		\$2,060,000	\$2,165,000

The Company's sales and marketing expenses are composed of two significant categories; variable selling expenses and sales department expenses.

Variable selling costs represent commissions that are paid to both internal sales employees and external manufacturer representatives. These expenses are recognized over the course of the related contract. Sales Department expenditures relate primarily to departmental salaries and advertising expenses.

Total sales and marketing costs of \$2.1 million in 2018 were \$100,000 lower than the \$2.2 million expenditures incurred in 2017. The slight decrease in overall sales and marketing expenditures in 2018 compared to 2017 is the result of a decrease in the average effective commission rate % paid to the Company's independent sales representatives.

Sales and marketing activities in fiscal 2018 were comparable to the activities conducted in 2017. Sales and marketing expenses in 2018 represented 8.5% of revenue compared to 9.6% in 2017. As a percentage of bookings, sales and marketing expense in 2018 were 8.1% compared to 10.0% in 2017.

Research and Development	2018	2017	Percent Change
		\$272,000	\$394,000

Research and Development expenses include research and development salaries, material and laboratory costs as well as subcontractor costs for the development of and installation of demonstration sites.

R&D activities in 2018 were reduced through some staff reductions. Work continued on high temperature treatment of volatile organic compounds and testing of advanced biofiltration media.

Mechanistic studies were undertaken to improve understanding of biotrickling and biofiltration technologies in order to achieve significant improvements in system performance.

Other Expense (Income)	2018	2017	Percent Change
		\$(526,000)	\$42,000

Other expense (income) comprises foreign exchange gains, government assistance and investment tax credits.

The increase in other income in 2018 compared to 2017 is primarily due to a \$496,000 foreign exchange gain compared to a \$130,000 foreign exchange loss realized in 2017 as a consequence of the US dollar denominated assets held by Biorem and the changes in the relative value of the Canadian dollar to the US dollar that occurred in 2018 and 2017.

Periodically government assistance is used to help fund the Company's Research and Development expenses. This government assistance relates to several programs which are offered by the Canadian Federal and Ontario Provincial governments. The assistance from these programs can fluctuate on a yearly basis depending on the activity that takes place during the year and the terms of the assistance programs.

General and Administration	2018	2017	Percent Change
		\$2,857,000	\$2,141,000

General and Administration expenses include administrative salaries, consulting, occupancy costs, office supplies, regulatory and transfer fees, travel and corporate affairs.

The \$716,000 increase in general and administration expenses in 2018 compared to 2017 was primarily due to a \$256,000 increase in bad debt expense related to accounts receivable in China a \$273,000 increase in legal expense related to claim for delay damages from a project completed in 2015 and from \$153,000 in severance costs.

Income Tax Expense	2018	2017
		\$(2,950,000)

In 2018, given the Company's past four years of profitability and the Company's current order backlog, management revised their estimates of future taxable profits and the Company recognized \$3.0 million in deferred tax assets. The deferred assets comprise the tax effect of \$29,000 of previously unrecognized tax losses, \$590,000 of previously unrecognized scientific research and experimental development expenditures, \$819,000 previously unrecognized temporary differences and \$1,512,000 of previously unrecognized investment tax credits.

Summary of Quarterly Results

Thousands \$ Except share data	2018				2017			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Revenue	10,871	4,392	5,186	3,883	8,538	5,265	5,672	3,083
Gross profit	3,394	1,049	1,120	815	2,409	1,479	1,238	1,144
Net earnings (loss)	4,334	232	267	(169)	1,051	553	(91)	17
EPS (loss) - basic	0.11	0.005	0.007	(0.004)	0.03	0.01	0.00	0.00
EPS (loss) - diluted	0.11	0.005	0.007	(0.004)	0.03	0.01	0.00	0.00

A number of factors contribute to variations in the Company's quarterly results: customer scheduling and delivery of our products and services, the Company's mix of product and service offerings, the currency in which the revenue is earned and the timing of revenue recognition.

Fourth Quarter 2018

Revenue in the fourth quarter of 2018 was \$10.9 million compared to \$4.4 million in the previous quarter and \$8.5 million in the fourth quarter of 2017. The significant increase in 2018 fourth quarter revenue compared to the previous quarters was attributable to the strong bookings in the first half of 2018 and the delivery and completion of projects in the fourth quarter that had been delayed from Q3 for reasons beyond Biorem's control. In addition \$1.9 million of orders were delivered in China in the fourth quarter of 2018.

The gross profit of \$3.4 million in the fourth quarter amounted to 31% of revenue, which was higher than the 24 % gross profit margin in the previous quarter and 28% in the same quarter the prior year. The increased margin was the result of higher revenue without any increase in engineering or project management overhead costs.

General and administrative expenses during the quarter were increased due to legal costs related to a claim for delay damages on a project completed in 2015, a provision of \$256,000 for the uncollectibility of certain accounts receivable in China. The variable portion of sales and marketing expenses were higher due to commission on higher revenues.

Liquidity

The Company finances its operations and capital expenditures through cash generated from operations and equity and debt financings.

2018 Cash flow

Cash and cash equivalents	December 2018	December 2017	Percent Change
	\$3,950,000	\$3,568,000	10.7%

Cash and cash equivalents increased by \$382,000 to \$4.0 million as at December 31, 2018 from \$3.6 million on December 31, 2017. Approximately 46% of the Company's cash is denominated in Canadian and 48% in US dollars as at December 31, 2018 compared to approximately 61% in Canadian dollars and 32% in US dollars at December 31, 2017.

The change in cash for the year is due to net cash flows from operating, investing and financing activities as follows:

	2018	2017
Cash provided by (used in) operating activities	\$(2,000)	\$1,173,000
Cash provided by (used in) investing activities	(231,000)	(14,000)
Cash provided by (used in) financing activities	-	686,000
Foreign exchange gain on foreign cash	615,000	605,000
Net increase (decrease) in cash	\$382,000	\$2,450,000

Cash provided by operating activities - Earnings from operating activities during the year generated \$1.9 million of cash. Increased operating activities resulted in cash being used to fund an increase in non-cash working capital by \$1.9 million. Particularly, \$1.9 million of cash was used to fund an increase in unbilled revenue, \$844,000 was used to fund a decrease in unearned revenue and \$400,000 to fund a decrease in accounts payable. These increases in non-cash working capital were partially offset by a \$369,000 decrease in prepaid expenses, a \$729,000 increase in accrued liabilities and a \$304,000 decrease in inventories.

Cash used in investing activities – The Company used \$230,000 of cash during the year to acquire new manufacturing equipment.

Cash provided by financing activities - There were no financing activities during the year that provided or used cash.

Liquidity Risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they are due. The Board of Directors reviews and approves the Company's operating and capital budgets, as well as any material transactions out of the ordinary course of business including proposals on major investments. The Company manages liquidity risk by maintaining adequate reserves, banking facilities and by continuously monitoring forecasts and actual cash flows and matching the maturity profiles of financial assets and liabilities.

The Company's objectives of managing liquidity risk are to forecast the liquidity position as accurately as possible and to maintain sufficient resources to pursue its growth strategy. The Company's financial liabilities include accounts payable and accrued liabilities, unearned revenue and contract advances as well as long and short term debt.

The Company's net current assets (liabilities) are summarized below.

	2018	2017
Cash	\$3,950,000	\$3,568,447
Working capital	9,683,000	7,219,000
Net current assets	\$9,683,000	\$7,219,000

(1) Working capital represents total current assets less total current liabilities.

A maturity analysis as at December 31, 2018 of the Company's financial liabilities based on gross, undiscounted cash flows is presented below. The maturity analysis is based on the earliest date that liabilities may be due.

	Carrying Amount	Contractual Cash Flow	Less than 1 month	1-3 months	3 months to 1 year	1+ years	Total
	\$	\$	\$	\$	\$	\$	\$
December 2018							
Accounts payable	3,816,947	3,816,947	3,816,947	-	-	-	3,816,947
Accrued liabilities	2,152,771	2,152,771	2,152,771	-	-	-	2,152,771
	<u>5,969,718</u>	<u>5,969,718</u>	<u>5,969,718</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>5,969,718</u>
December 2017							
Accounts payable	4,012,166	4,012,166	4,012,166	-	-	-	4,012,166
Accrued liabilities	1,345,046	1,345,046	1,345,046	-	-	-	1,345,046
	<u>5,357,212</u>	<u>5,357,212</u>	<u>5,357,212</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>5,357,212</u>

Capital Resources

The Company currently does not have any undrawn debt facilities. The Company does not have any significant capital expenditure projects underway or forecasted in 2019.

Financial instruments

At December 31, 2018 the Company held no forward exchange contracts.

Commitments

Commitments include operating leases for office equipment and facilities, bank guarantees, and performance bonds issued on our behalf by financial institutions in connection with facility leases and contracts with public sector customers. Aside from the aforementioned, the Company does not have any other business arrangements or any equity interests in unconsolidated companies that would have a significant effect on its assets and liabilities as at December 31, 2018.

Off-Balance Sheet Arrangements

As a general practice, the Company does not enter into off-balance sheet financing arrangements. Except for operating leases and letters of credit, all commitments are reflected on the balance sheet.

Transactions with Related Parties

The Company did not have any material related party transactions during the year ended December 31, 2018.

Outstanding Share Data

	December 31 2018	December 31 2017
Common shares	38,661,558	38,661,558
Employee stock options (1)	3,356,642	3,478,181
	<u>42,018,200</u>	<u>42,139,739</u>

(1) Assumes 100% conversion of outstanding options

There have been no material changes to the Company's outstanding share data from December 31, 2018 to the date of this MD&A.

Significant Accounting Policies and Estimates

The preparation of these consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses and related contingent assets and liabilities. On an on-going basis, management evaluates the estimates including those related to long-term revenue contracts, intangible assets, bad debts, warranty obligations and income taxes. The estimates are based on historical experience and on various other factors that are believed to be reasonable in the circumstances. Actual results may differ from these estimates. The following critical accounting policies include those which involve management's more significant judgments and estimates:

- a) Revenue recognition: The Company derives revenue from long-term contracts which require performance over a time span which may extend beyond one or more accounting periods. The Company recognizes revenue on long-term contracts using the percentage-of-completion method, based on costs incurred relative to the estimated total contract

costs. Management has concluded that costs incurred are the best available measure of progress toward completion of these contracts. Estimated total direct contract costs is subjective and requires the use of our best judgments based upon the information we have available at that point in time. Management's estimate of total direct contract costs has a direct impact on the revenue recognized by the Company. Changes in estimates are reflected in the period in which they are made and would affect revenue and cost of sales and unbilled or unearned revenue.

The Company also provides for estimated losses on incomplete contracts in the period in which such losses are determined.

- b) **Deferred income taxes:** Deferred income tax assets are recognized for the future income tax consequences attributable to temporary differences between the financial statement carrying value of assets and liabilities and their respective tax bases. Deferred income tax assets and liabilities are measured using enacted income tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The calculation of current and deferred income taxes requires management to make estimates and assumptions and to exercise a certain amount of judgment. The income tax bases of assets and liabilities are based upon the interpretation of income tax legislation across various jurisdictions. The deferred income tax assets and liabilities are also impacted by expectations about future operating results and the timing for reversal of temporary differences as well as possible audits of tax filings by the regulatory authorities. In assessing the realizability of deferred income tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax assets, projected future taxable income and tax planning strategies in making this assessment. The Company has recorded \$2,950,000 of deferred tax assets as at December 31, 2018.
- c) **Investment tax credits:** In the normal course of operations, the Company's Scientific Research & Experimental Development (SR&ED) expense claims are subject to review by federal and provincial government authorities. Reviews of certain of the Company's SR&ED claims are incomplete at December 31, 2018 and as such, amounts disclosed may be subject to change, pending the outcome of such reviews.
- d) **Warranty obligations:** Management routinely assesses and adjusts for its anticipated warranty costs based on experience and estimates of the potential warranty obligations for its installations.
- e) **Bad debt expense:** Management routinely reviews accounts receivable and sets up a reserve for expected credit losses. This is an estimate since some of the reserved accounts may be collected and we may subsequently find that some accounts currently deemed collectible become uncollectible.

- f) Long lived assets: Management reviews the carrying value of long lived assets including plant and equipment and amortizable intangible assets for impairment to determine if the carrying value of an asset may not be recoverable due to changes in the current and expected future use of the asset, external valuations of the asset, and the obsolescence or physical damage to the asset. If such indicators of impairment exist, the asset's recoverable amount is estimated. An impairment loss is recognized if the carrying amount of an asset or its related cash generating unit exceeds its estimated recoverable amount.
- g) Interest, as well as any gains and losses relating to the financial liability are recognized in profit or loss.
- h) On January 1, 2018 the Company adopted the new provisions for **Financial Instruments** under IFRS 9 and the new provisions for **Revenues from Contracts with Customers** under IFRS 15. The adoption of these new accounting policies had no significant impact on financial statements of the Company. See Note 3.t) of the December 31, 2018 consolidated financial statements for a more detailed description of these new accounting policies and their adoption.

Outlook

The Company is in a strong financial position at the end of 2018 and expects to build on this strength in 2019. The Company's current order backlog combined with a strong sales pipeline is expected to result in increased revenue and ebitda again in 2019. We expect to see continued growth in bookings and revenues from all geographic regions in 2019.

Risks and Uncertainties

Liquidity risk

At December 31, 2018 the Company had working capital of \$9,683,000. Management believes the Company has sufficient working capital to meet all of its operational needs.

Sales Cycle

The Company's long sales cycle may cause revenue fluctuations period over period – since operating expenses are largely based on anticipated revenue trends and a significant portion of expenses are, and will continue to be, fixed, any delay in generating or recognizing revenues could negatively impact our business, operating results, financial condition or prospects.

Order Backlog

As of December 31, 2018 the Company's Order Backlog was \$21.8 million. However, the expected future revenue from the Company's Order Backlog may not be realized or, if realized, may not result in net earnings. Projects could remain in Order Backlog for an extended period of time. In addition, project cancellations or scope adjustments may occur from time to time with respect to contracts reflected in the Company's Order Backlog. Cancellation or delay of contracts may have a material adverse effect on our financial status.

Delays or Defaults in customer payments affecting liquidity

Due to the nature of our contracts, at times we commit resources to projects prior to receiving payments from our customers in amounts sufficient to cover expenditures as they are incurred. Delays in customer payments may require us to make a working capital investment. If a customer defaults in making payments on a project to which we have devoted significant resources, it could have a material negative effect on our liquidity as well as the results from operations.

Reputation

The Company's reputation for technical expertise, high level of service and the lower life cycle cost of products compared to our competitors products is one of our most valuable business development assets. The loss of this reputation due to client dissatisfaction represents a risk to our ability to win additional business both from existing clients and from future clients.

Patents and Proprietary Right

The Company relies on a combination of patents, trademarks, trade secrets and knowledge to protect its proprietary technology and rights. There can be no assurance that the Company's patents will not be infringed upon, that the Company would have adequate remedies for any such infringement, or that its trade secrets will not otherwise become known or independently developed by its competitors. There can also be no assurance that any patents now or hereafter issued to, licensed by or applied for by the Company will be upheld, if challenged, or that the protections afforded thereby will not be circumvented by others.

Dependence on Subcontractors

The Company does not directly engage in field construction but relies on field construction subcontractors operating under the supervision of the Company's employees. The unavailability of field construction subcontractors, or a substantial increase in pricing by a significant number of these subcontractors could adversely affect the Company. In addition, failure of subcontractors to properly perform work that has been subcontracted to them could adversely affect the Company by increasing the costs to the Company of completing a project and by damaging the Company's reputation.

Product Liability

If there are defects in our systems or if significant reliability, quality or performance problems develop with respect to our systems, there may be a number of negative effects on our business. Our products are often installed in corrosive or flammable environments. The Company carries product liability insurance, which includes coverage for sudden or accidental pollution impact. It is possible that a customers' inability to comply with applicable pollution control laws or regulations stemming from failure or non-performance of the Company's products or systems may subject the Company to liability for any fines imposed upon such customer by regulatory authority or for damages asserted to have been incurred by any third party adversely affected.

Competition

Virtually all contracts for the Company's products are obtained through competitive bidding. Although the Company competes on technical expertise, reputation for service and lower life cycle cost, there can be no assurance that the Company will maintain its competitive position in its principal markets.

Fixed Price Contracts may result in losses

The Company's receipt of a fixed price contract as a consequence of being the successful bidder carries the inherent risk that the Company's actual performance cost may exceed the estimates upon which its bid was based. To the extent that contract performance costs exceed projected costs, the Company's profitability could be materially affected.

Foreign Exchange

The Company is subject to risk of exchange rate fluctuations related to anticipated revenues, Order Backlog and existing assets and liabilities denominated in currencies other than Canadian dollars. At December 31, 2018, the Company had US dollar denominated net monetary assets of \$4,212,000.

Stock Trading Volume is low

The monthly average trading volume of the BIOREM common shares on the Toronto Venture Exchange during 2018 was 240,000 shares. Due to the low trading volume the price of the common shares could be subject to wide price fluctuations in response to business development announcements, competitors, quarterly variations in operating results, and other events or factors.

Risk to Product Development

Corporate resources are currently being expended on the development of the new media technologies. These technologies are constantly in development and have not yet been fully

commercialized. There can be no guarantee that the new media technology will achieve the performance criteria which the Company believes is necessary for it to be a successful product in the market. In addition, there are risks associated with commercializing any product including the risk that full scale production may not be achieved at an acceptable cost level. Failure to successfully commercialize the new media technologies may materially and adversely affect the Company's financial condition and results of operations.

Acceptance of new products by the Market

Market risk exists for new products such as the new media. There is no assurance that new products will be accepted by the market, that desired volumes will be realized over the product life or that the product life will not be shorter than expected due to product obsolescence. New products that are launched by the Company's competitors may also have price or other advantages over the Company's products. In addition, new product offerings may also require more significant marketing and sales efforts to gain market acceptance.

Dependency on key personnel

The success of the Company is dependent upon the attraction and retention of highly skilled personnel in a number of key areas including management positions. The unexpected loss or departure of any of the Company's key officers or employees could have a material adverse effect on the future operations of the Company. The success of the Company's business will depend, in part, upon the Company's ability to attract and retain qualified personnel as they are needed. There can be no assurance that the Company will be able to engage the services of such personnel or retain its current personnel.