

For the Quarter Ended June 30, 2019

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 operation and financial condition. This discussion should be read in conjunction with the Consolidated Financial Statements for the year ended December 31, 2018 and the accompanying notes, which are prepared in accordance with International Financial Reporting Standards or "IFRS" and the Company's condensed consolidated interim financial statements for the period ended June 30, 2019. This discussion is based on information available to management as of August 28, 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, August 28, 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, foreign exchange gains and losses, 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, 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 Events For The Second Quarter 2019

Key events of note in Q2 2019 include the following:

- Order bookings for the quarter were \$3.3 million
- Order backlog stood at \$23.0 million at the end of the quarter
- Net earnings for the quarter were \$258,000
- Working capital on June 30, 2019 was \$9.5 million
- Cash on hand has increased to \$5.8 million at June 30, 2019 from \$4.0 million on December 31, 2018.

Selected Quarterly Information (Unaudited)

Selected Balance Sheet Information as at

	June 30	March 31	December 31	September 30	June 30	March 31
(in ,000's)	2019	2019	2018	2018	2018	2018
Cash and cash equivalents	5,751	6,478	3,950	3,618	3,656	5,795
Accounts receivable	7,463	6,440	8,611	4,816	4,607	3,326
Unbilled revenue	3,016	3,406	4,530	3,272	3,522	2,653
Working capital	9,526	9,164	9,682	7,589	7,581	7,209
Total assets	20,381	20,641	21,048	14,144	13,198	12,866
Accounts payable	3,076	3,607	3,817	2,642	2,481	2,005
Accrued liabilities	1,794	2,072	2,153	1,162	1,331	1,327
Deferred revenue	2,374	2,183	1,765	1,978	499	1,714
Other long term liabilities		-	-			-
Shareholders' equity	12,712	12,353	12,895	7,853	7,677	7,308

Selected Statement of Operations information for the three month periods ended

	June 30	March 31	December 31	September 30	June 30	March 31
(in ,000's)	2019	2019	2018	2018	2018	2018
Revenue	5,946	4,061	10,871	4,392	5,185	3,883
Cost of goods sold	4,611	3,357	7,477	3,343	4,065	3,068
Gross margin	1,335	704	3,393	1,049	1,120	815
Total operating expenses	1,079	823	2,103	816	852	981
Other items	-	-	7	1	1	3
Net earnings (loss)	258	(119)	4,334	232	267	(169)
EPS-basic	0.007	0.00	0.11	0.01	0.007	0.00
EPS- fully diluted	0.007	0.00	0.11	0.01	0.007	0.00

All amounts except Working capital have been determined under IFRS.

Financial Results For The Three Months Ended June 30, 2019

The following analysis of the results of operations for the three months ended June 30 2019 includes comparisons to the three months ended March 31, 2019 and June 30, 2018.

Revenues

Revenues for the quarter were \$5.9 million, an increase of \$1.9 million or 46% over the previous quarter and \$761,000 or 15% above the three months ended June 30, 2018. The difference in Q2 2019 revenues and the previous quarter was largely the result of differences in the timing of customers delivery requirements in the corresponding periods.

Revenue by Geography

	June 2019	March 2018	June 2018
Canada	\$1,076,000	\$531,000	\$607,000
United States	4,446,000	3,258,000	2,151,000
China	380,000	171,000	729,000
Other	44,000	101,000	1,698,000
Total Revenue	\$5,946,000	\$4,061,000	\$5,185,000

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 quarter to quarter but from the data it is evident that the Company relies heavily on the USA and Canada. The project mix in the current backlog of the Company is consistent with the geographic mix shown in the table.

A number of factors contribute to variations in the Company's quarterly 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.

Bookings and Backlog

Order Bookings	June 2019	March 2019	June 2018
	\$3,300,000	\$9,400,000	\$6,300,000

Order Bookings are those binding contracts that the Company enters into with a third party for the delivery of our products or services. Bookings can vary considerably from quarter to quarter, due to both the size of the contracts won and the timing of the awarding of the contracts.

Bookings in the second quarter were \$3.3 million, \$6.1 million lower than the immediately prior quarter and \$3.0 million below the second quarter 2018 bookings. The lower bookings in the quarter are due to timing the timing of the receipt of orders. Year to date bookings total \$12.7 million compared to \$12.3 million of orders booked in the first half of 2018. The orders booked during the quarter were primarily from the Company's core markets in North America. The Company's bidding activity during the quarter and subsequent to the quarter continues to be robust.

Order Backlog	June 2019	March 2019	June 2018
	\$23,000,000	\$26,500,000	\$22,460,000

The value of the Company's order backlog at June 30, 2019 has decreased by \$3.5 million over the value of the backlog at March 31, 2019 and is virtually unchanged from the \$22.5 million backlog on June 30, 2018.

Due to customer scheduling, the Company cannot provide precise guidance as to the quarters when the Backlog will be converted into revenue however management's current estimate is that approximately fifty percent of the Backlog will be converted into revenue during fiscal 2019.

Gross Profit and Operating Expenses

Gross Profit	June 2019	March 2019	June 2018
	\$1,335,000	\$704,000	\$1,120,000

Gross profit for the quarter was 22.4% of revenue compared to 17.3% for the quarter ended March 31, 2019 and 21.6% for the quarter ended June 30, 2018. The increase in gross profit percentage over the prior quarter was primarily due to the allocation of fixed engineering costs over a higher revenue amount in Q2 of 2019.

The fixed component of cost of goods sold which includes engineering and project management remained consistent with prior quarters at \$740,000 in the quarter.

Sales and Marketing	June 2019	March 2019	June 2018
	\$569,000	\$651,000	\$516,000

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

Variable selling costs represent amounts that are paid to both internal sales employees and external manufacturer representatives. These costs are incurred when the project revenue is recognized during the period. Sales department expenditures relate primarily to departmental salaries and advertising expenses.

Sales and marketing costs for the second quarter of 2019 totaled \$569,000 and represented 9.6% of revenue compared to the 8.5 % of revenue that sales and marketing costs represented for the 2018 fiscal year. Year to date sales and marketing costs are 12.2 % of revenue. Sales and marketing costs were lower in the second quarter of 2019 than in the previous quarter due to lower commission expenses as a result of several projects that revenue in the quarter that were sold directly and incurred no commission costs.

Research and Development	June 2019	March 2019	June 2018
	\$17,000	\$7,000	\$98,000

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

General and Administrative	June 2019	March 2019	June 2018
	\$519,000	\$739,000	\$403,000

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

Increases in general and administrative expenses for the first and second quarter of 2019 over the prior same periods in the prior year were primarily the result of one time legal fees resulting from a collection dispute with a customer.

Other Expense(Income)	June 2019	March 2019	June 2018
	\$(26,000)	\$(573,000)	\$(156,000)

Other expense (income) in the quarter was \$26,000 of foreign exchange gain on the monetary assets of Biorem Technologies Inc held in US dollars compared to \$3,000 of government funding and \$577,000 of foreign exchange gains in the first quarter of 2019.

Liquidity

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

2019 Cash flow

Cash and cash equivalents	June 2019	March 2019	June 2018
	\$5,751,000	\$6,478,000	\$3,656,000

Cash decreased by \$727,000 to \$5,751,000 at June 30, 2019 from \$6,478,000 at March 31, 2019.

The sources and uses of cash for the quarters ended are summarized below:

	June 2019	March 2019	June 2018
Cash provided by (used in) operating activities	\$(941,000)	\$2,920,000	\$(2,158,000)
Cash provided by (used in) investing activities	(33,000)	-	(10,000)
Cash provided by (used in) financing activities	-	-	-
Foreign exchange gain (loss) on cash	247,000	(392,000)	29,000
Net increase (decrease) in cash	\$(727,000)	\$2,528,000	\$(2,139,000)

Cash provided by operating activities - Earnings from operating activities during the quarter generated \$320,000 of cash and \$1,261,000 of cash was used to fund increases in non-cash working capital. In particular, \$1,107,000 was used to fund an increase in accounts receivable, and \$715,000 was used to reduce accounts payable. This use of cash was offset by a \$499,000

decrease in prepaid expenses, a \$384,000 decrease in unbilled revenue and a \$180,000 increase in unearned revenue.

Cash used in investing activities – The Company made an investment of \$33,000 in leasehold improvements at their Guelph facility during the quarter.

Cash provided by financing activities – There were no financing activities during the quarter.

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.

	June 2019	March 2019	June 2018
Cash and cash equivalents	\$5,751,000	\$6,478,000	\$3,656,000
Working capital	9,526,000	9,166,000	7,581,000
Net current assets (liabilities)	\$9,526,000	\$9,166,000	\$7,581,000

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

A maturity analysis as at June 30, 2019 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
	\$	\$	\$	\$	\$	\$	\$
June 2019							
Accounts payable	3,076,187	3,076,187	3,076,187	-	-	-	3,076,187
Accrued liabilities	1,794,322	1,794,322	1,794,322	-	-	-	1,794,322
	<u>4,870,509</u>	<u>4,870,509</u>	<u>4,870,509</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>4,870,509</u>
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>

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 June 30, 2019 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 June 30, 2019.

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 three months ended June 30, 2019.

Outstanding Share Data

	June 30	March 31	June 30
	2019	2019	2018
Common shares	38,661,558	38,661,558	38,661,558
Employee stock options (1)	3,390,500	3,356,642	3,311,998
	<u>42,052,058</u>	<u>42,018,200</u>	<u>41,973,556</u>

(1) Assumes 100% conversion of outstanding options

There have been no material changes to the Company's outstanding share data from June 30, 2019 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, goodwill, 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 accessing 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 deferred tax assets as at June 30, 2019 of \$ 2,950,000.

- 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 June 30, 2019 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 bad debts on a customer-by-customer basis. 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) Compound financial instruments: The financial liability component of a compound financial instrument is recognized initially at the fair value of a similar liability that does not have an equity conversion option. The equity component, representing the holders' option to convert into common shares, is recognized initially at fair value determined as the excess of the face value of the compound financial instrument and the fair value of the liability

component. Any directly attributable transaction costs are allocated to the liability and equity components in proportion to their initial carrying amounts. Subsequent to initial recognition, the liability component of a compound financial instrument is measured at amortized cost using the effective interest method. The equity component of a compound financial instrument is included within contributed surplus and is not re-measured subsequent to initial recognition.

- h) Interest, as well as any gains and losses relating to the financial liability are recognized in profit or loss.
- i) There were no new accounting policies adopted during the period.

Outlook

Revenues for the first half of 2019 are up 10% from the same period a year earlier and bookings to June 30 were 3% higher than bookings for the first six months of 2018. Bookings in the China market have been weak in the first six months but we expect that to change in the second half with bookings in North America and the rest of the world to be equal to or greater than bookings in the first half. Bidding activity has been robust in the eight months of the year and the value of the Company's outstanding bids remain high. We expect that approximately 50% of the order backlog to be delivered during the balance of 2019, however construction and projects delays that are beyond Biorem's control can significantly impact the timing of our deliveries and quarterly revenues reported.

The Company continues to invest in business development in China, and while these activities will have only modest impact on 2019 revenues, we expect that they should result in a significant contribution to the results of fiscal 2020 and beyond. Modest increases in expenses related to these activities are planned for the balance of the year.

Business development costs are planned to increase slightly but other costs and operating margins are expected to remain fairly constant and we do not expect any significant deviation from the immediately prior quarters.

Risks and Uncertainties

Liquidity risk

At June 30, 2019 the Company had working capital of \$9,526,000. 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 June 30, 2019 the Company's Order Backlog was \$23.0 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 June 30, 2019, the Company had US dollar denominated net monetary assets of \$5,442,000.

Stock Trading Volume is low

The monthly average trading volume of the BIOREM common shares on the Toronto Venture Exchange was 207,000 shares during the first six months of 2019. 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.