Photon Control Inc.

Management's Discussion and Analysis

For the three and nine months ended September 30, 2018

(in Canadian dollars, amounts in thousands except number of shares and per share amounts)

DATED November 8, 2018

MANAGEMENT'S DISCUSSION AND ANALYSIS

For the three and nine months ended September 30, 2018

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MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis ("MD&A") provides information for the three and nine months ended September 30, 2018, and up to and including November 8, 2018. This MD&A is prepared in accordance with National Instrument 51-102, and should be read in conjunction with Photon Control Inc.'s (the "Company") unaudited condensed interim consolidated financial statements and accompanying notes for the three and nine months ended September 30, 2018, and the consolidated financial statements and accompanying notes for the year ended December 31, 2017.

The financial data contained in this report and in the unaudited condensed interim consolidated financial statements and accompanying notes for the three and nine months ended September 30, 2018 have been prepared in accordance with International Financial Reporting Standards ("IFRS") and are stated in Canadian dollars, unless otherwise noted.

In addition to the results reported in accordance with IFRS, the Company uses various non-GAAP financial measures, which are not recognized under IFRS, as supplemental indicators of the Company's operating performance and financial position. These non-GAAP financial measures are provided to enhance the user's understanding of the Company's historical and current financial performance and its prospects for the future. Management believes that these measures provide useful information in that they exclude amounts that are not indicative of the Company's core operating results and ongoing operations and provide a more consistent basis for comparison between quarters and years. Details of such non-GAAP financial measures and how they are derived are provided in conjunction with the discussion of the financial information reported.

The Company has reclassified certain balances to conform to the presentation adopted in the current year. In addition, there may be minor differences due to rounding of numbers.

Certain statements in this MD&A constitute forward-looking statements or forward-looking information within the meaning of applicable securities laws. You should carefully read "Cautionary Note Regarding Forward Looking Statements" in this MD&A and should not place undue reliance on any such forward-looking statements.

In this MD&A, unless the context otherwise requires, references to "the Company", "Photon Control", "we", "us" and "our" refer to Photon Control Inc. and its subsidiaries.

Additional information about the Company, including the Annual Information Form ("AIF"), is available at www.photoncontrol.com and www.sedar.com.

OVERVIEW

Photon Control designs, manufactures, and distributes a wide range of optical sensors and systems to measure temperature and position. These products are used by the world's largest Wafer Fabrication Equipment ("WFE") manufacturers and end users in the semiconductor and solid-state industries. Photon Control's high quality products provide industry leading accuracy, speed and quality in the most extreme conditions and are backed by a team of experts providing a variety of on-site and remote services including custom design, installation, training and support. Headquartered in an ISO 9001:2015 manufacturing facility in Vancouver, British Columbia, Canada, Photon Control is listed on the Toronto Stock Exchange (the "TSX"), trading under the symbol "PHO".

COMPANY HIGHLIGHTS

The following significant corporate and financial events have taken place during the three months ended September 30, 2018, and up to and including November 7, 2018:

- On July 30, 2018, the Company announced it entered into an exclusive distribution agreement with Crowntech Photonics for Photon Control's fiber optic-based temperature and position sensors in China.
- On September 27, 2018, the Company announced the introduction of a Rapid Prototyping program for its fiber optic sensor product lines, reducing lead times for producing prototype sensors to an industry best of four to six weeks, a reduction of over 40% from historical lead times.
- On October 11, 2018, the Company announced the transition of three new products to the final pre-production release step in its New Product Introduction ("NPI") process.
- During the three months ended September 30, 2018, the Company repurchased and cancelled 675,600 common shares at a cost of $1,363, in accordance with the current Normal Course Issuer Bid (the "2018 NCIB").

PRODUCTS, DISTRIBUTION AND INDUSTRIES

Semiconductor Industry: Temperature and Position Sensors

The semiconductor capital equipment industry offers several significant and growing applications for our technology and is the primary source of revenue and growth for our business. The Company designs and produces precision temperature and position sensors used by semiconductor WFE manufacturers in our ISO-certified manufacturing facility. The manufacturing of silicon wafers for semiconductors involves a multitude of complex processes; monitoring and maintaining the correct wafer position and wafer temperature during these processes is critical to achieving the product yield and productivity required for high-volume manufacturing. The measurement accuracies required of such sensors are becoming more challenging as semiconductor devices scale to atomic level dimensions and become more three-dimensional ("3D") in nature. Furthermore, these sensors must maintain their accuracy in the harsh environments encountered in critical semiconductor equipment, such as the strong radio frequency electromagnetic fields encountered in plasma etch and plasma-assisted deposition systems.

Photon Control's fiber optic sensors are immune to radio frequency interference and are thus able to deliver the high accuracies required for state-of-the-art process control.

The need for scaling semiconductor devices to atomic level dimensions has also created a need for more measurement points inside the chamber. Temperature and position anomalies have a greater impact on yield at these atomic level dimensions and must be measured and controlled more precisely, which increases the value and use of fiber optic sensors. In addition, as semiconductor equipment has gone from 28 nm node to sub-10 nm nodes, the number of measurement points and etch steps has increased more than four-fold. Similarly, the proliferation of 3D and advanced logic chip designs have become more common; and thus, increasing significantly as a percentage of total chips manufactured. These factors have driven and are expected to continue to drive demand for the Company's products.

SALES, MARKETING AND DISTRIBUTION

Photon Control sells its products globally with sales to original equipment manufacturers ("OEMs") primarily in the United States who in turn sell their products to semiconductor manufacturers in the United States, Asia and Europe. We also sell through a network of distributors in Asia who sells our products to OEMs in their home markets.

MARKET LANDSCAPE

In addition to the increasing number of measurement points, there are several other market and technology trends that will contribute to the growth of the fiber optic sensor market in semiconductor manufacturing:

- Semiconductors have revolutionized all aspects of our economy and lives – among the technologies fueled by semiconductors today and in the future are smartphones, 5G mobile, the cloud, autonomous driving, and artificial intelligence. As a critical building block of these technologies, semiconductors will continue to enable innovation and transform industries, and hence, chip makers are expected to continue to increase production to meet this growing market.
- The need for more storage capacity and computing power also continues to drive the scaling of semiconductor devices to smaller dimensions and to be more "3D". These advanced technologies are more complex which require more process steps, equipment and sensors.
- The scaling of semiconductor devices requires patterning of semiconductor materials at atomic level dimensions. This is achieved by a process called "multi-patterning" which requires extra plasma etch and deposition steps compared to standard patterning, and these equipment segments have been outpacing the overall WFE market. The Company's fiber optic sensors are used mostly in plasma etch and deposition equipment, and this will continue to fuel the Company's revenue growth.

SELECTED FINANCIAL INFORMATION

The following table highlights key financial information for the three and nine months ended September 30, 2018 as compared to the prior comparable periods:

	Three months ended September 30, 2018	Three months ended September 30, 2017	Variance ($)	Variance (%)	Nine months ended September 30, 2018	Nine months ended September 30, 2017	Variance ($)	Variance (%)
Revenue	$ 10,052	$ 12,024	$ (1,972)	-16%	$ 38,471	$ 32,780	$ 5,691	17%
Cost of sales	4,859	5,473	(614)	-11%	17,111	14,444	2,667	18%
Gross profit	5,193	6,551	(1,358)	-21%	21,360	18,336	3,024	16%
Gross profit %	*51.7%*	*54.5%*			*55.5%*	*55.9%*		
Operating expenses								
General and administrative	1,361	1,835	(474)	-26%	5,316	8,674	(3,358)	-39%
Engineering	966	827	139	17%	2,708	2,455	253	10%
Sales and marketing	693	232	461	199%	1,944	731	1,213	166%
Total operating expenses	3,020	2,894	126	4%	9,968	11,860	(1,892)	-16%
Operating income	2,173	3,657	(1,484)	-41%	11,392	6,476	4,916	76%
Finance income	142	10	132	1320%	286	141	145	103%
Accretion expense on contingent consideration	(187)	(31)	(156)	503%	(570)	(94)	(476)	506%
Change in fair value of contingent consideration	112	-	112	100%	(790)	-	(790)	-100%
Gain on sale of assets	-	-	-	0%	166	-	166	100%
Foreign exchange (loss) gain	(551)	(1,264)	713	-56%	1,167	(2,182)	3,349	-153%
	(484)	(1,285)	801	-62%	259	(2,135)	2,394	-112%
Net income before tax	1,689	2,372	(683)	-29%	11,651	4,341	7,310	168%
Income tax	440	700	(260)	-37%	3,667	1,302	2,365	182%
Net income	1,249	1,672	(423)	-25%	7,984	3,039	4,945	163%
Other comprehensive income (loss) on foreign exchange translation of subsidiary	24	-	24	100%	(9)	-	(9)	-100%
Total comprehensive income	$ 1,273	$ 1,672	$ (399)	-24%	$ 7,975	$ 3,039	$ 4,936	162%
Basic earnings per share	$ 0.01	$ 0.02	$ (0.01)	-50%	$ 0.07	$ 0.03	$ 0.04	133%
Diluted earnings per share	$ 0.01	$ 0.01	$ -	0%	$ 0.07	$ 0.03	$ 0.04	133%

Operating income is a non-GAAP measure and is therefore not universally defined. The Company defines operating income as earnings before finance income, accretion expense on contingent consideration, change in fair value of contingent consideration, gain on sale of assets, foreign exchange (loss) gain and income tax.

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The following table highlights key financial information as at September 30, 2018 and December 31, 2017:

Financial Position	September 30, 2018	December 31, 2017	Variance ($)	Variance (%)
Cash	$ 42,651	$ 34,345	$ 8,306	24%
Total assets	65,036	55,549	9,487	17%
Total liabilities	10,661	8,889	1,772	20%
Total shareholders' equity	54,375	46,660	7,715	17%

The following table provides the details of our EBITDA for the three and nine months ended September 30, 2018 and 2017:

	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Net income for the period	$ 1,249	$ 1,672	$ 7,984	$ 3,039
Add (deduct)				
Finance income	(142)	(10)	(286)	(141)
Accretion expense on contingent consideration	187	31	570	94
Income tax	440	700	3,667	1,302
Depreciation of property and equipment	374	263	1,080	490
Amortization of intangible assets	333	12	984	28
Foreign exchange loss (gain)	551	1,264	(1,167)	2,182
Corporate changes	-	-	-	2,953
Photon R&D settlement	-	-	-	951
Relocation costs	-	160	-	571
EBITDA[1] for the period	**$ 2,992**	**$ 4,092**	**$ 12,832**	**$ 11,469**

(1) EBITDA is a non-GAAP measure and is therefore not universally defined. The Company defines EBITDA as earnings before finance income, accretion expense, income tax, depreciation, amortization and foreign exchange loss (gain). For the comparative period, EBITDA was further refined to remove the effect of non-recurring items.

The Company considers the following items as non-recurring:

- Corporate changes – the Company made significant changes to its Board of Directors, management team and business structure in 2017. Additionally, the Company restructured its Oil and Gas business model from direct sales to a distributor model in 2017 before its eventual sale in 2018. One-time expenditures resulting from these changes include legal, consulting and recruiting fees, as well as severance and related payments.
- Photon R&D settlement – the Company took actions following the unauthorized transfer of $4,500 to Photon Control R&D Ltd. ("Photon R&D") on June 3, 2016 (the "Unauthorized Transfer"), resulting in a settlement agreement on April 14, 2017 ("Settlement Agreement"). One-time expenditures related to this matter include settlement costs, legal, consulting and advisory fees.

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- Relocation costs – the Company completed the fit-out of and relocation to a new manufacturing facility in 2017. One-time expenditures include third party services, labour costs and the cost of dismantling and restoring the vacated premises.

OVERALL PERFORMANCE AND DISCUSSION OF OPERATIONS

Revenue

The following table provides a summary of our revenues by segment:

	Three months ended September 30,		Variance		Nine months ended September 30,		Variance	
	2018	2017	($)	(%)	2018	2017	($)	(%)
Semiconductor	$ 10,044	$ 11,979	$ (1,935)	-16%	$ 38,388	$ 32,541	$ 5,847	18%
Other	8	45	(37)	-82%	83	239	(156)	-65%
Total	**$ 10,052**	**$ 12,024**	**$ (1,972)**	**-16%**	**$ 38,471**	**$ 32,780**	**$ 5,691**	**17%**

Semiconductor revenues for the three months ended September 30, 2018 decreased 16% over the prior comparable period due to the sell through of finished goods and work-in-progress inventories held by customers, in response to softening demand for semiconductor capital equipment. Semiconductor revenues for the nine months ended September 30, 2018 increased 18% over the same year-ago period, as a result of the Company capturing an increased share of its customers' spend and the robust market conditions persisting in the semiconductor industry. Other revenues for the three and nine months ended September 30, 2018 decreased over the 2017 comparable periods due to the sale of the Company's Oil and Gas product line earlier in 2018 and an increased focus on semiconductor revenues.

The following table provides a summary of our revenues by territory:

	Three months ended September 30,		Variance		Nine months ended September 30,		Variance	
	2018	2017	($)	(%)	2018	2017	($)	(%)
United States	$ 5,475	$ 6,718	$ (1,243)	-19%	$ 22,819	$ 19,401	$ 3,418	18%
Asia	4,554	5,258	(704)	-13%	15,590	13,231	2,359	18%
Rest of world	23	48	(25)	-52%	62	148	(86)	-58%
Total	**$ 10,052**	**$ 12,024**	**$ (1,972)**	**-16%**	**$ 38,471**	**$ 32,780**	**$ 5,691**	**17%**

For the three months ended September 30, 2018, the Company's revenues earned from customers located in the United States and Asia decreased 19% and 13% over the prior comparable period, respectively, due to the decline in semiconductor revenues as described above. For the nine months ended September 30, 2018, revenues earned in United States and Asia increased 18% over 2017, consistent with the overall growth in the semiconductor segment. There were nominal fluctuations in revenues earned from rest of world compared to the same year-ago periods.

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Gross Profit

Gross margin decreased to 51.7% and 55.5% for the three and nine months ended September 30, 2018 compared to 54.5% and 55.9% in the prior comparable periods, respectively. The decrease in gross margin for the quarter was primarily the result of a 16% decrease in overall revenues which reduced manufacturing efficiencies available at higher volumes. Gross margin for the year-to-date was flat compared to 2017.

Operating Expenses

	Three months ended September 30, 2018	Three months ended September 30, 2017	Variance ($)	Variance (%)	Nine months ended September 30, 2018	Nine months ended September 30, 2017	Variance ($)	Variance (%)
Operating expenses, as reported	$ 3,020	$ 2,894	$ 126	4%	$ 9,968	$ 11,860	$ (1,892)	-16%
Deduct								
Depreciation of property and equipment	(179)	(145)	(34)	23%	(520)	(219)	(301)	137%
Amortization of intangible assets	(28)	(12)	(16)	133%	(70)	(28)	(42)	150%
Share-based payments	(170)	(301)	131	-44%	(694)	(886)	192	-22%
Corporate changes	-	-	-	0%	-	(2,834)	2,834	-100%
Photon R&D settlement	-	-	-	0%	-	(951)	951	-100%
Relocation costs	-	(160)	160	-100%	-	(571)	571	-100%
Operating expenses, adjusted	**$ 2,643**	**$ 2,276**	**$ 367**	**16%**	**$ 8,684**	**$ 6,371**	**$ 2,313**	**36%**

Total operating expenses for the three and nine months ended September 30, 2018 were $3,020 and $9,968 compared to $2,894 and $11,860 in the prior comparable periods, respectively. When adjusted for non-cash charges and non-recurring items such as corporate changes, Photon R&D settlement and relocation costs incurred in 2017, operating expenses were $2,643 and $8,684 compared to $2,276 and $6,371 in the prior comparable periods, respectively; the increases were attributable to a larger labour workforce to support the Company's revenue levels and future growth strategies, and higher development costs incurred for new products.

General and Administrative

	Three months ended September 30, 2018	Three months ended September 30, 2017	Variance ($)	Variance (%)	Nine months ended September 30, 2018	Nine months ended September 30, 2017	Variance ($)	Variance (%)
General and administrative expenses, as reported	$ 1,361	$ 1,835	$ (474)	-26%	$ 5,316	$ 8,674	$ (3,358)	-39%
Deduct								
Depreciation of property and equipment	(179)	(145)	(34)	23%	(520)	(219)	(301)	137%
Amortization of intangible assets	(24)	(10)	(14)	140%	(61)	(22)	(39)	177%
Share-based payments	(100)	(284)	184	-65%	(537)	(819)	282	-34%
Corporate changes	-	-	-	0%	-	(2,738)	2,738	-100%
Photon R&D settlement	-	-	-	0%	-	(951)	951	-100%
Relocation costs	-	(160)	160	-100%	-	(571)	571	-100%
General and administrative, adjusted	**$ 1,058**	**$ 1,236**	**$ (178)**	**-14%**	**$ 4,198**	**$ 3,354**	**$ 844**	**25%**

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General and administrative expenses totalled $1,361 and $5,316 for the quarter and year-to-date compared to $1,835 and $8,674 in the prior comparable periods, respectively. When adjusted for non-cash charges and non-recurring items as described elsewhere, adjusted cash expenses totalled $1,058 and $4,198 for the three and nine months ended September 30, 2018 compared to $1,236 and $3,354 in the prior comparable periods, respectively. The decrease in adjusted cash expenses for the quarter was a result of cost reduction measures taken on discretionary spending, and the increase for the year-to-date period was due to the effect of an increased workforce and its related costs throughout the preceding 12 months, and one-time professional and listing fees incurred for the Company's graduation to the Toronto Stock Exchange in 2018.

Engineering

Engineering totalled $966 and $2,708 for the quarter and year-to-date compared to $827 and $2,455 in the prior comparable periods, respectively. Prior to the Settlement Agreement, the Company outsourced its engineering activities to Photon R&D. On April 14, 2017, following the acquisition of Photon R&D, the Company onboarded an engineering team and the variance relates to the change in approach and investments made to new product development to support the Company's future growth.

Sales and Marketing

Sales and marketing expenses were $693 and $1,944 for the quarter and year-to-date compared to $232 and $731 in the prior comparable periods, respectively. The increase in sales and marketing resulted from the increased staff levels to support current and future growth of the Company's revenues.

Accretion Expense on Contingent Consideration

Contingent consideration relates to the acquisition of certain assets of Photon Control R&D Ltd. in 2017. It is determined using a discount model applied to royalties on revenues earned from defined products from January 1, 2017 to December 31, 2021. Accretion expense represents the increase of contingent consideration through the discount model resulting from the passage of time.

Change in Fair Value of Contingent Consideration

Change in fair value of contingent consideration resulted in a gain of $112 and loss of $790 for the quarter and year-to-date, and is based on revisions to management's estimate of the potential total amount of contingent consideration compared to the estimate made at the end of the preceding period.

Gain on Sale of Assets

On February 15, 2018, the Company sold all of the assets and rights associated with its Optical Flow Meter product to King's Energy Inc. ("King's") for minimum gross proceeds of $350. The gross proceeds include immediate cash consideration of $200 and contingent consideration of at least $150, and is based on a percentage of revenues earned by King's for a five year period commencing from the transaction date. The carrying value of the disposed assets was $184, resulting in a gain on sale of assets totaling $166 for the year-to-date.

Foreign Exchange Gain/Loss

The Company is subject to foreign exchange risk as its products are priced in United States dollars ("USD"), while the majority of its expenses and assets are denominated in Canadian dollars. The Company does have a partial "natural hedge" against foreign exchange risk, as some of its component parts and accounts payable are priced and or valued in US dollars. The foreign exchange loss for the three months ended September 30, 2018 was due to the strengthening of the Canadian dollar relative to the US dollar throughout the quarter, and the foreign exchange gain for the nine months ended September 30, 2018 reflected the overall trend that the US dollar was stronger relative to the Canadian dollar.

Income Tax

Income tax for the three and nine months ended September 30, 2018 were $440 and $3,667, compared to $700 and $1,302 in the comparable period in 2017.

EBITDA

EBITDA is defined as earnings before finance income, accretion expense, income tax, depreciation, amortization and foreign exchange (loss) gain. For the comparative period, EBITDA was further refined to remove the effect of non-recurring items, including corporate changes, Photon R&D settlement, and relocation costs as described elsewhere.

EBITDA for the three and nine months ended September 30, 2018 were $2,992 and $12,832 compared to $4,092 and $11,469 in the comparable period in 2017. The decrease in EBITDA for the quarter was due to lower overall revenues and gross margin, and the increase for the year-to-date period was due to strong market conditions persisting in the semiconductor industry in the first half of this year.

Order Backlog

Order backlog was $14,355 on September 30, 2018, a decrease from $18,300 at December 31, 2017 and an increase from $12,600 at September 30, 2017. Order backlog represents the unfulfilled value of sales orders received and scheduled for fulfillment in the remaining rolling 6-month period. The decrease in the order backlog from December 31, 2017 is attributable to a slow-down in capital spending by semiconductor manufacturers after a very strong first half of this year.

SUMMARY OF QUARTERLY RESULTS

The global semiconductor industry is fast paced, competitive and constantly innovating to increase processing speed and power. The ability to anticipate these technological changes and innovate to meet them without compromising quality, is a key competitive advantage in this market. As a supplier of componentry to semiconductor WFE manufacturers, Photon Control's key strengths include our rapid prototyping capabilities, our ISO certified production facility and CE methods, and our ability to manufacture to our customer's exacting standards with our highly trained workforce. In addition to our high quality manufacturing strengths, our products include unique proprietary characteristics which both differentiate our products and allow us to outperform competitive offerings.

The following table provides a summary of the Company's financial results for the eight most recently completed quarters.

	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018
Revenue	$ 9,011	$ 11,879	$ 8,877	$ 12,024	$ 11,033	$ 13,854	$ 14,565	$ 10,052
Gross profit	$ 4,285	$ 7,116	$ 4,669	$ 6,551	$ 4,955	$ 7,879	$ 8,288	$ 5,193
Gross margin %	48%	60%	53%	54%	45%	57%	57%	52%
Net income (loss)	$ 1,351	$ 1,698	$ (331)	$ 1,672	$ 2,653	$ 2,882	$ 3,853	$ 1,249
Basic EPS (loss)	$ 0.01	$ 0.02	$ (0.00)	$ 0.02	$ 0.02	$ 0.03	$ 0.03	$ 0.01
Diluted EPS (loss)	$ 0.01	$ 0.02	$ (0.00)	$ 0.01	$ 0.02	$ 0.03	$ 0.03	$ 0.01
Cash	$ 32,508	$ 32,112	$ 25,053	$ 26,966	$ 34,345	$ 33,367	$ 40,794	$ 42,651

The Company has achieved general long-term growth in its revenue over the past eight quarters as its primary segment, the semiconductor industry, has grown, and the Company has solidified its position as a supplier of choice for its customers. The Company's net income for quarters in 2017 were negatively affected by the non-recurring items as described elsewhere.

LIQUIDITY AND CAPITAL RESOURCES

The following table provides a summary of the Company's working capital as at September 30, 2018 and December 31, 2017:

	September 30, 2018	December 31, 2017	Variance
Cash	$ 42,651	$ 34,345	$ 8,306
Trade and other receivables	4,053	3,393	660
Inventories	5,951	4,052	1,899
Prepaid expenses and deposits	382	279	103
Assets held for sale	-	184	(184)
Total current assets	**53,037**	**42,253**	**10,784**
Accounts payable and accrued liabilities	4,266	4,003	263
Income taxes payable	2,001	579	1,422
Current portion of contingent consideration	1,417	1,321	96
Total current liabilities	**7,684**	**5,903**	**1,781**
Working capital	**$ 45,353**	**$ 36,350**	**$ 9,003**

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Management believes the Company will be able to continue to meet its liabilities and commitments as they become due and will generate sufficient amounts of cash from the continued manufacturing and distribution of existing products and the commercialization of new products. This cash will be used to maintain capacity, meet planned growth and development activities and other corporate initiatives. The Company continues to monitor all expenditures and implement cash management strategies to ensure that it has adequate cash reserves to fund identified expenditure requirements.

Notwithstanding the Company's positive working capital position, the Company may require financing in order to satisfy future growth activities. The Company may also need additional capital to fund specific growth projects or acquisitions in the future, and while no such projects are planned at this time outside of the Normal Course Issuer Bid, a change in circumstances could result in the need for additional capital.

Capital Management

The Company considers shareholders' equity as capital, the book value of which totaled $54,375 at September 30, 2018 (December 31, 2017 - $46,660).

The Company manages its capital structure to safeguard its ability to operate as a going concern, to provide sufficient resources to meet day-to-day operating requirements, to allow it to enhance existing product offerings as well as develop new ones, and to have the financial ability to expand the size of its operations by taking on new customers. In managing its capital structure, the Company takes into consideration various factors, including the growth of its business and related infrastructure and the upfront cost of taking on new clients.

The Company's officers and senior management are responsible for managing the Company's capital and do so through regular meetings and regular review of financial information. The Company's Board of Directors is responsible for overseeing this process.

Working Capital

The increase of working capital over December 31, 2017 was the result of its profitable operating performance, and significant capital expenditures in 2017 which did not reoccur during the nine months ended September 30, 2018.

Cash

At September 30, 2018, the Company held cash of $42,651 compared to $34,345 as at December 31, 2017, with the increase attributable to its strong operating performance. The Company's cash position include the deployment of $1,363 towards the current Normal Course Issuer Bid, resulting in the re-purchase and cancellation of 675,600 common shares as at September 30, 2018.

Trade and Other Receivables

Trade and other receivables of $4,053 increased from $3,393 as at December 31, 2017 due to the effect of an early payment arrangement with a customer ending on December 31, 2017.

Inventories

Inventories as at September 30, 2018 totaled $5,951 compared to $4,052 as at December 31, 2017 with the increase occurring in anticipation of future demand from its major customers.

The Company follows a "Copy Exact" standard in providing its products to its customers, and is required to maintain adequate inventory on hand to fill purchase orders from its customers. As a result, and due to the fact that the timing and quantum of such purchases orders cannot be forecasted with complete accuracy, the Company must also have available an adequate quantity of inventories on hand. In addition, it may have to add contract staff to its production team to meet large orders. These variances in demand and revenue can have a short-term effect on the Company's liquidity from time to time.

Accounts Payable and Accrued Liabilities

As at September 30, 2018, the Company's accounts payable and accrued liabilities, which fall due for payment within 12 months of the balance sheet date, were $4,266, compared to $4,003 as at December 31, 2017; the increase is the result of trade payables for inventory purchases to support current and future revenue opportunities.

OFF BALANCE SHEET ARRANGEMENTS

The Company had no off-balance sheet arrangements for the three and nine months ended September 30, 2018 and 2017.

COMMITMENTS

Under operating lease agreements for office premises, the Company is required to make future annual minimum lease payments as follows:

2018	$	83
2019		334
2020		297
2021		285
2022 and onwards		854
Total	**$**	**1,853**

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RELATED PARTY TRANSACTIONS

The remuneration of key management for the three and nine months ended September 30, 2018 and 2017 is as follows:

	Three months ended		Nine months ended	
	September 30, 2018	**September 30, 2017**	**September 30, 2018**	**September 30, 2017**
Cash-based payments	**$ 334**	$ 548	**$ 1,199**	$ 1,653
Share-based payments	**75**	231	**471**	736
Total	**$ 409**	$ 779	**$ 1,670**	$ 2,389

Cash-based payments include salaries, bonuses, consulting fees, severance and other benefits.

FINANCIAL INSTRUMENTS AND FAIR VALUES

The Company's financial assets and liabilities are measured using amortized costs which approximates fair value due to the nature of these instruments.

	September 30, 2018		December 31, 2017	
	Carrying Value	**Fair Value**	**Carrying Value**	**Fair Value**
Financial assets	**$ 46,704**	**$ 46,704**	$ 37,791	$ 37,791
Financial liabilities	**4,266**	**4,266**	4,003	4,003

Fair value hierarchy

The following financial assets and liabilities are measured at fair value on a recurring basis using quoted prices in active markets for identifiable assets (Level 1); significant other observable inputs (Level 2); and significant unobservable inputs (Level 3):

			Fair Value	
September 30, 2018	**Carrying Value**	**Level 1**	**Level 2**	**Level 3**
Financial liabilities				
Contingent consideration	$ 4,092	$ -	$ -	$ 4,092

			Fair Value	
December 31, 2017	**Carrying Value**	**Level 1**	**Level 2**	**Level 3**
Financial liabilities				
Contingent consideration	$ 4,005	$ -	$ -	$ 4,005

The Company has used a discounted cash flow valuation technique in calculating the fair value of the contingent consideration. This valuation technique included inputs relating to estimated cash outflows under the arrangement and the use of a discount rate appropriate to the Company (20%). The fair value measurements are sensitive to the discount rate used in calculating the fair values. A 1% increase in the discount rate would reduce the fair value of the contingent consideration by $49. During the three and nine months ended September 30, 2018, the Company recorded accretion expense of $187 and $570

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(2017 - $31 and $94) in relation to contingent consideration, respectively, reflecting the change in fair value of liability that is attributable to credit risk.

Financial risk factors

The Company is exposed to a number of risks. These risks include credit risk, liquidity risk and market risk. The Company has established policies and procedures to manage these risks, with the objective of minimizing the adverse effects that change in the variable underlying these risks could have on the Company's consolidated financial statements.

Credit risk

The following table provides information regarding the aging of trade and other receivables as at September 30, 2018 and December 31, 2017:

	Neither past due nor impaired	Aged 1 - 30 days	Aged 31 - 60 days	Aged 61 - 90 days	Aged 90 + days
As at September 30, 2018	**85%**	**10%**	**5%**	**0%**	**0%**
As at December 31, 2017	91%	9%	0%	0%	0%

As at September 30, 2018, 15% (December 31, 2017 – 9%) of the Company's trade and other receivables was past due. The definition of items that are past due was determined by reference to the Company's standard credit terms, net of any provisions for losses. At each period end, the Company reviews the collectability of outstanding receivables. Specific accounts are only written off once all collection efforts have been explored or when legal bankruptcy has occurred. During the three and nine months ended September 30, 2018, the Company had a bad debt recovery of $5 and incurred bad debt expense of $93 of bad debts expense (2017 – bad debt recovery of $8 and bad debt expense of $16), respectively.

Liquidity risk

As at September 30, 2018 and December 31, 2017, the Company had a $80 credit card facility with a Canadian Chartered bank.

Market risk

Foreign exchange risk

At September 30, 2018, the Company held net current monetary assets in USD equal to $26,520 (December 31, 2017 - $34,966). The Company estimates the impact of a 10% change in the Canadian dollar exchange rate on its net current monetary assets to be $2,652 (December 31, 2017 - $3,497).

Interest rate risk

The Company is exposed to interest rate risk by virtue of holding cash.

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CRITICAL ACCOUNTING JUDGMENTS AND ESTIMATES

The preparation of the condensed interim consolidated financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

The judgments, estimates, assumptions applied in the condensed interim consolidated financial statements, including key sources of estimation uncertainty, were the same as those applied in last annual consolidated financial statements for the years ended December 31, 2017 and 2016.

ADOPTION OF NEW ACCOUNTING STANDARDS

The Company has adopted IFRS 9, Financial Instruments ("IFRS 9") with a date of initial application of January 1, 2018. The Company applied IFRS 9 retrospectively and did not have any quantitative impacts upon adoption. There were no differences in the accounting of the Company's financial instruments under its previous accounting policy and IFRS 9.

The Company has adopted IFRS 15, Revenue from Contracts with Customers ("IFRS 15") with a date of initial application of January 1, 2017. The Company applied IFRS 15 retrospectively (without practical expedients) and did not have any quantitative impacts upon adoption. There were no differences in the accounting of the Company's revenues under its previous accounting policy and IFRS 15.

SUBSEQUENT EVENT

Subsequent to September 30, 2018, the Company re-purchased and cancelled 957,625 common shares pursuant to the 2018 NCIB at a cost of $1,652.

OUTSTANDING SHARE DATA

As at September 30, 2018, the Company had 110,742,102 common shares issued and outstanding. As at November 7, 2018, the Company had 109,865,413 common shares were issued and outstanding.

As at September 30, 2018, the Company had 3,509,750 stock options outstanding entitling the holders to purchase one common share for each option held. As at November 7, 2018, the Company had 3,504,750 stock options outstanding.

As at September 30, 2018, the Company had restricted share units outstanding for 219,000 common shares. As at November 7, 2018, the Company had restricted share units outstanding for 129,000 common shares.

RISKS AND UNCERTAINTIES

Our business is subject to significant risks and uncertainties and past performance is no guarantee of future performance. The risks and uncertainties in the Company's most recently filed AIF, which is available on the Canadian System for Electronic Document Analysis and Retrieval website (www.sedar.com) are those that we currently believe to be material, and do not represent all of the risks that we face. Additional risks and uncertainties, not presently known to us, may become material in the future or those risks that we currently believe to be immaterial may become material in the future. If any of the following risks actually occur, alone or in combination, our business, financial condition and results of operations, as well as the market price of our common shares, could be materially adversely affected.

CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS

This MD&A contains certain statements and information that are not based on historical facts and constitute forward-looking statements or forward-looking information within the meaning of Canadian securities laws (collectively, "forward-looking statements"), including our business outlook for the short and longer term and statements regarding our strategy, plans and future operating performance. Forward-looking statements are provided to help you understand our views of our short and longer-term plans, expectations and prospects. We caution you that forward-looking statements may not be appropriate for other purposes.

Any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance (often, but not always, identified by words or phrases such as "expects", "is expected", "anticipates", "believes", "plans", "projects", "estimates", "assumes", "intends", "strategy", "goals", "objectives", "potential", "possible" or variations thereof or stating that certain actions, events, conditions or results "may", "could", "would", "should", "might" or "will" be taken, occur or be achieved, or the negative of any of these terms and similar expressions) are not statements of historical fact and may be forward-looking statements. Forward-looking statements are not promises or guarantees of future performance; they represent our current views and may change significantly. Forward-looking statements are based on a number of material assumptions, including, but not limited to, those listed below, which could prove to be significantly incorrect:

- our ability to develop, manufacture and sell new products that meet the needs of our customers and gain commercial acceptance;
- our ability to continue to sell our products in line with quantity, price and delivery expectations;
- our ability to attract new business;
- our production being adversely affected by development, operating and regulatory risks;
- our ability to successfully complete new purchase orders along the timelines expected;
- continued and future demand for the Company's products;
- continued sales to the Company's major customers;
- continued financial health of the semiconductor industry;
- our ability to continue and further enhance revenue diversification and open new market opportunities; and
- our expectations regarding market risk, including interest rate changes, tax changes and foreign currency fluctuations.

Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any results, performance or achievements expressed or implied by the forward-looking statements. Such uncertainties and factors include, among others:

- risks associated with compliance with regulatory bodies' quality system regulations;
- risks associated with the Company's ability to retain major customers;
- risks associated with shifts in demand for the Company's products and the Company's ability to expand its manufacturing capacity;
- risks associated with continuous technological change, evolving industry standards, shifting customer needs and new product introductions and enhancements;

- uncertainty relating to the timing of product development and commercial launch;
- risks associated with competition;
- uncertainty relating to operating results;
- risks associated with product liability claims;
- risks related to product pricing;
- risks associated with the Company's intellectual property;
- uncertainty related to potential legal proceedings involving the Company;
- operational risks associated with manufacturing;
- uncertainty relating to general economic conditions and the cyclical nature of the semiconductor industry;
- uncertainty relating to fluctuations in currency exchange rates, particularly between the Canadian and U.S. dollars;
- uncertainty related to international operations, including additional development projects and other business opportunities;
- risks related to the volatility of the trading price and volume of the Company's common shares;
- risks associated with attracting and retaining qualified personnel;
- risks associated with operating in jurisdictions with complex and changing tax laws;
- risks related to managing and storing proprietary information and sensitive or confidential data relating to the Company's operations electronically; and
- risks associated with compliance with various federal, provincial, local and international laws governing the environment.

This list is not exhaustive of the factors that may affect any of our forward-looking statements. Forward looking statements are statements about the future and are inherently uncertain, and our actual achievements or other future events or conditions may differ materially from those reflected in the forward-looking statements due to a variety of risks, uncertainties and other factors, including, without limitation, those referred to in this report under the heading "Risks and Uncertainties".

The Company's forward-looking statements are based on beliefs, expectations and opinions of management on the date the statements are made. For the reasons set forth above, readers should not place undue reliance on forward-looking statements. The Company undertakes no obligation to update or revise any forward-looking statements included herein if these beliefs, estimates and opinions or other circumstances should change, except as otherwise required by applicable law.