

Management's Discussion and Analysis

For the three and twelve months ended December 31, 2018

March 27, 2019

MANAGEMENT'S DISCUSSION AND ANALYSIS

ABOUT THIS MD&A

This Management Discussion and Analysis ("MD&A") discusses the consolidated financial condition and operating performance for Carmanah Technologies Corporation and should be read together with our audited consolidated financial statements for the year ended December 31, 2018. References to the "Company", "Carmanah", "we", "us" or "our" are to be taken as references to Carmanah Technologies Corporation. These documents, along with additional information about our Company, including this annual MD&A Report and Annual Information Form are available at www.carmanah.com and www.sedar.com. This document contains forward-looking information qualified by the forward-looking statements in the next section.

Unless otherwise indicated, all financial information presented in this MD&A is in our functional and presentation currency, United States of America ("US") dollars, and has been prepared in accordance with International Financial Reporting Standards ("IFRS"). Section 7 outlines any relevant recent or pending accounting policy developments that may impact our financials.

Our consolidated financial statements include our accounts and those of our wholly-owned subsidiaries, Carmanah Solar Power Corp. ("CSPC"), Carmanah Technologies (US) Corporation, Sol, Inc. ("Sol"), Sabik Oy, Sabik Offshore GmbH, Sabik Pte Ltd., Sabik Limited, Sabik Offshore Limited, Sabik Oü (collectively, the "Sabik Group"), Information Display Company ("IDC"), Vega Navigations Americas Inc and Vega Industries Limited ("Vega").

Our disclosure controls and procedures ("DC&P") are designed to provide reasonable assurance that all relevant information is gathered and reported to our senior management on a timely basis so that appropriate decisions can be made regarding public disclosure. Our management determines if information is material based on whether they believe a reasonable investor's decision to buy, sell or hold securities in our Company would likely be influenced or changed if the information were omitted or misstated. The MD&A and the consolidated financial statements were reviewed by our Audit Committee and approved by our board of directors (the "Board"). This MD&A is prepared as of March 27, 2019.

Our management reports on certain non-IFRS measures which are used to evaluate financial performance. As non-IFRS measures generally do not have a standardized meaning and therefore may not be comparable to similar measures presented by other issuers, securities regulations require non-IFRS measures to be clearly defined, qualified and reconciled with their nearest IFRS measure. See Section 3 for the definition, calculation and reconciliation of these figures.

On October 11, 2016, we announced our intention to divest our Power business segment. For the purposes of discussing our operating results in this MD&A, we have presented our financial information based on our continuing operations unless otherwise noted. As described in section 4, the On-Grid solar power EPC portion of this business ("Solar EPC") was divested on April 3, 2017 and the Off-Grid portion of this business was divested on August 1, 2017. Assets and liabilities of the Power business segment that were not divested as part of the sale have been classified as non-trade receivables and non-trade payables as at December 31, 2018 and for the comparative prior period as at December 31, 2017.

On December 12, 2018, we announced our intention to divest all the issued and outstanding equity interests of each of Sabik Oy, Sabik Ou, Sabik PTE Ltd., and Sabik Ltd. and their respective assets (our "Marine business"); the business and assets of our Airfield Ground lighting business, our Aviation Obstruction business as well as some miscellaneous business assets that support the businesses sold to SPX Corporation ("SPX") for \$77.6 million (the "SPX Divestiture"). For the purposes of discussing our operating results in this MD&A, we have presented our financial information based on our continuing operations unless otherwise noted. When operations are classified as discontinued, the Consolidated Statement of Cash Flows and Consolidated Statements of Income and Total Comprehensive Income is re-presented as

MANAGEMENT'S DISCUSSION AND ANALYSIS

if the operation has been discontinued from the start of the comparative year. The comparative Consolidated Statement of Financial Position is not restated.

Due to this reclassification of results to discontinued operations as described above and in Section 4, the Company determined that its Offshore Wind vertical now meets the definition of a reportable segment in accordance with IFRS 8 - *Operating Segments*. A new reportable segment was therefore recognized within continued operations as presented at December 31, 2018.

The discontinued operations above do not impact our continuing operations and their impact on continuing operations has not been discussed in this MD&A. Comparative segment reporting in this MD&A has been adjusted to reflect the new reportable segment.

SECTION	CONTENTS	
1	Financial Highlights	A summary of our consolidated results for the fourth quarter and year ended December 31, 2018
2	Our Business	Overview of our business, including industry trends and outlook
3	Non-IFRS Financial Measures	Reconciliation of EBITDA and Adjusted EBITDA and Core Operating Expenditures (as defined in Section 3 below)
4	Operational and Business Highlights	A discussion regarding key operating activities during the period
5	Financial Results	A discussion of our financial performance for the period
6	Liquidity, Capital Resources, and Other Disclosures	A discussion of our operating cash flows, investments and financing activities, as well as liquidity, credit facilities and other disclosures
7	Critical Accounting Estimates and Accounting Policy Developments	Accounting estimates that are critical to determining financial results, and changes to accounting policies
8	Risks and Risk Management	A discussion on certain risks and uncertainties facing us

CAUTION REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this MD&A are forward-looking statements that involve risks and uncertainties. Forward-looking statements are often, but not always, identified by words such as “may”, “would”, “could”, “will”, “intend”, “should”, “expect”, “plan”, “anticipate”, “believe”, “estimate”, “predict”, “potential”, “continue” and similar expressions. Forward-looking statements in this MD&A include, but are not limited to:

- statements relating to the expected growth opportunities and commercial acceptance and demand for our products;
- the successful development of new and innovative products to help penetrate new geographic markets;
- the future success of any potential reorganization or restructuring of our businesses and our ability to achieve profitability in the future;
- the outcome of claims and lawsuits;
- our intention to be a leader or top contender in each of our market segments;
- our belief that the signals industry is ready for consolidation;
- our plan to explore synergy opportunities that may exist in overlapping product lines, commercial efficiencies, research and development (“R&D”) projects and potential manufacturing competencies;
- the successful implementation of machine to machine satellite solutions for Globalstar;
- our plan to equip all strategic products with remote monitoring infrastructure;
- our belief that “connected” devices are likely to be data gateways that provide a variety of sensor data that will increase safety and further reduce operating costs;
- our expectation that the current installed base of signaling products will become obsolete and result in increases in growth rates for the signals industry;
- our expected use of proceeds from the SPX Divestiture;
- our expectation that Offshore segment revenues will be shifted to future periods due to project delays;
- the amount and sufficiency of R&D spending;
- our expectation of growth in solar light emitting diode (“LED”) illumination;
- the expected results of the acquisition of Information Display Company (“IDC”).

By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific, and many factors could cause actual results or events to differ materially from those anticipated in such forward-looking statements. Although the forward-looking statements contained in this MD&A are based upon what we believe to be reasonable assumptions, prospective investors cannot be assured that actual results will be consistent with these forward-looking statements. Such assumptions include, but are not limited to: our assumptions regarding opportunities and availability of potential new projects; our assumption that we will be able to comply with current and future regulatory requirements; and our assumption that we will be able to compete and keep pace with the industry. In evaluating these statements, readers should specifically consider various factors, including, but not limited to, the risks discussed under the heading “Risk Factors” in our Annual Information Form dated March 27, 2019, or included in section 9 of this MD&A. Additionally, factors that could cause or contribute to such differences include, but are not limited to, the following:

- actions of competitors, including competitors with greater name recognition and financial resources;
- our ability to develop products and technologies that keep pace with the continuing changes in technology, evolving industry standards, new product introductions by competitors and changes in client preferences and requirements;
- our ability to complete, manage and integrate acquisitions;

MANAGEMENT'S DISCUSSION AND ANALYSIS

- our ability to manage the outstanding warranty obligations in connection with the retained responsibility in Solar EPC;
- slower than anticipated adoption of solar LED lighting technology;
- our ability to manage expansion effectively;
- fluctuation in foreign currency exchange rates;
- our reliance on third party manufacturers;
- our ability to purchase components for our products at competitive prices;
- our reliance on sales agents and third parties with whom we have developed strategic relationships to sell our products;
- our reliance on key employees;
- our ability to protect our intellectual property rights;
- environmental and regulatory compliance;
- our reliance on government contracts and subsidies;
- problems with product quality or reliability;
- downturns in general economic and market conditions;
- our ability to maintain adequate liquidity or raise sufficient debt or equity financing when needed;
- risk that we may become involved in disputes, litigation or arbitration proceedings;
- our ability to mitigate cybersecurity risks and protect confidential information;
- our ability to find a suitable and appropriate investment for the use of proceeds from the SPX divestiture;
- risk that anticipated benefits from any acquisitions will be realized;
- our ability to implement changes and programs successfully on a timely basis;
- our ability to achieve future profitability upon a potential reorganization or restructuring of our businesses;
- geopolitical or other global or local events; and
- our ability to sell certain products as a result of changes to policy and/or regulation in jurisdictions where we sell products.

Except as otherwise indicated, forward-looking statements do not reflect the potential impact of any non-recurring or other unusual items or of any dispositions, mergers, acquisitions, other business combinations or other transactions that may be announced or that may occur after the date hereof. The financial impact of these transactions and non-recurring and other unusual items can be complex and depends on the facts particular to each of them. We therefore, cannot describe the expected impact in a meaningful way or in the same way the Company presents known risks affecting its business.

Readers should not place undue reliance on forward-looking statements. The forward-looking statements in this MD&A are made as of the date hereof. We do not assume any obligation to update the forward-looking information contained in this MD&A other than as required by applicable laws (including without limitation Section 5.8(2) of National Instrument 51-102 Continuous Disclosure Obligations).

1. Financial Highlights

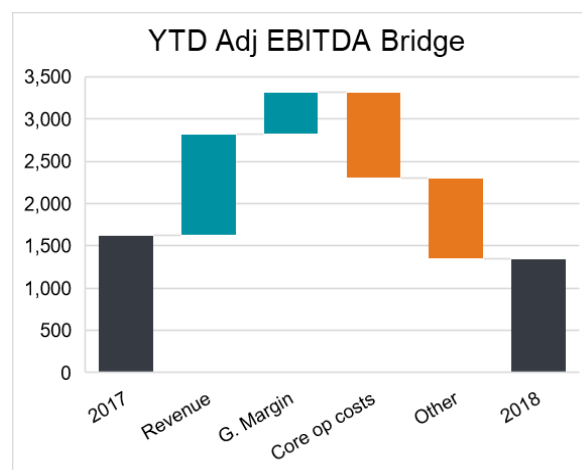
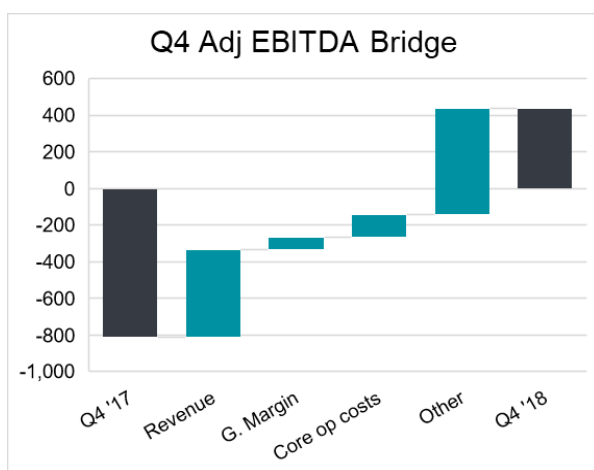
FINANCIAL HIGHLIGHTS FOR THE THREE AND TWELVE MONTHS ENDED DECEMBER 31, 2018 AND 2017

Three months ended December 31, Twelve months ended December 31

US\$ thousands	2018	2017	Change	2018	2017	Change
Revenue	8,090	6,652	21.6%	30,719	27,313	12.5%
Gross margin	2,753	2,209	24.6%	11,339	9,647	17.5%
Gross margin %	34.0%	33.2%	n.a.	36.9%	35.3%	n.a.
Core Operating Expenditures *	3,098	3,219	(3.8)%	12,196	11,189	9.0%
Net income/(loss)	387	(671)	n.a.	(775)	(1,532)	(49.4)%
Adjusted EBITDA *	440	(809)	n.a.	1,333	1,614	(17.4)%

*Adjusted EBITDA and Core Operating Expenditures are Non-IFRS measures which are discussed in section 3.

ADJUSTED EBITDA BRIDGES



MANAGEMENT'S DISCUSSION AND ANALYSIS

BACKLOG RECONCILIATION – FOURTH QUARTER

US\$ thousands	Q3 closing*	Bookings	Revenue	Q4 closing
Signals	2,766	4,770	4,544	2,992
Offshore	2,540	2,769	2,815	2,494
Illumination	407	1,676	731	1,352
Total	5,713	9,215	8,090	6,838

* Q3 has been restated to adjust for discontinued operations

FOURTH QUARTER

In the fourth quarter of 2018, we generated revenues of \$8.1 million, up \$1.4 million or 21.6% over the fourth quarter of 2017 revenues of \$6.7 million. Our Signals segment revenues increased \$1.8 million or 67.0% for the quarter compared to prior year; our Offshore segment revenues decreased by \$0.3 million or 11.0%; and our Illumination segment revenues remained consistent with prior year. Within our Signals segment, we increased revenues in both our Telematics (\$1.1 million) and Traffic (\$0.7 million) verticals.

Gross margin percentage in the fourth quarter of 2018 was 34.0%, up from 33.2% in the same period in 2017.

Core Operating Expenditures in the fourth quarter of 2018 of \$3.1 million, down \$0.1 million or 3.8% over the same period in 2017, primarily due to a decrease in development costs. Net Income for the fourth quarter of 2018 was \$0.4 million, an improvement from a Net Loss of \$0.7 million in the same period in 2017. The improvement is a direct result of increase revenues due to the growth of our Telematics vertical.

Our management relies on Adjusted EBITDA (a non-IFRS measure) to gauge financial performance. In the fourth quarter of 2018, our Adjusted EBITDA was \$0.4 million or 5.4% of revenue, an improvement from (\$0.8) million or (12.2)% of revenue in the same period in 2017. A table reconciling net income and Adjusted EBITDA is included in section 3.

BACKLOG RECONCILIATION – FULL YEAR

US\$ thousands	December 31, 2017*	Bookings	Revenue	December 31, 2018
Signals	477	17,278	14,763	2,992
Offshore	4,366	9,899	11,771	2,494
Illumination	1,325	4,212	4,185	1,352
Total	6,168	31,389	30,719	6,838

* 2017 has been restated to adjust for discontinued operations

MANAGEMENT'S DISCUSSION AND ANALYSIS

FULL YEAR

For the year ended December 31, 2018, we generated revenues of \$30.7 million, up \$3.4 million or 12.5% over 2017 revenues of \$27.3 million. The Signals segment generated revenues of \$14.8 million, up \$3.9 million or 35.4% over 2017 revenues of \$10.9 million. The Offshore segment generated revenues of \$11.8 million, down \$0.7 million or 5.6% over 2017 revenues of \$12.5 million. The Illumination segment generated revenues of \$4.2 million, up \$0.3 million or 6.2% over 2017 revenues of \$3.9 million. The Signals increase was due to increased revenues in our Telematics (\$3.9 million) and Traffic (\$0.4 million) verticals.

Gross margin percentage for the year was 36.9%, up from 35.3% in 2017.

Our total core operating expenses for the year were \$12.2 million, up \$1.0 million or 9.0% over 2017. The increase was due to an increase in amortization costs relating to a patent acquired in 2018 as well as increased development expenditures. Net Loss for the year was \$0.8 million, which compares to a loss of \$1.5 million in 2017. The improvement is a direct result of higher revenues due to the growth of our Telematics vertical in 2018.

Our management relies on Adjusted EBITDA (a non-IFRS measure) to gauge financial performance. For the year ended December 31, 2018, Adjusted EBITDA was \$1.4 million, or 4.3% of revenue, vs. the \$1.6 million, or 5.9% of revenue, reported in the same period in 2017. A table reconciling net income and Adjusted EBITDA is included in section 3.

2. Our Business

BUSINESS OVERVIEW

We design, develop and distribute a portfolio of products focused on energy optimized LED solutions for infrastructure. Since 1996, we have earned a global reputation for delivering durable, dependable, efficient and cost-effective solutions for industrial applications that perform in some of the world's harshest environments. We manage our business within three reportable segments: Signals, Illumination and Offshore. The Signals segment serves the Traffic and Telematics markets. The Illumination segment provides solar powered LED outdoor lights for municipal and commercial customers, while the Offshore segment specializes in the provision of comprehensive safety and marking systems for offshore wind farms. As discussed in the "about this MD&A" section, Offshore became a new reportable segment in 2018.

The tables below provide an overview of these segments and the verticals or businesses they serve.

Signals



Our Airfield Lighting business specialized in solving airfield lighting challenges for clients in off-grid or weak-grid locations. This vertical's self-contained solar airfield lights supported daily flight operations at helipads and airstrips in demanding environments around the globe and included both military and civilian airports. Carmanah's main competitors for this business included Avlite Systems Pty Ltd., and Metalite Aviation Lighting.



Our Aviation Obstruction business provided practical and cost-effective solutions for aviation hazard marking, barricade lighting, way-finding, railway blue flag protection, equipment marking and more by way of Carmanah's solar powered self-contained LED lighting products. Carmanah's main competitors in this sector included Avlite Systems Pty Ltd., Dialight PLC and Flash Technology LLC.



Carmanah's Marine business provided total marine aids-to-navigation products and systems for Coast Guards, marine authorities, navies and ports around the globe. Our main competitors in the marine market included Sealite Pty Ltd., and Tideland Signals Corporation.



We serve the North American traffic safety market through the provision of solar powered and grid-connected flashing beacons for pedestrian crosswalk signals, school zone flashers, 24-hour roadway beacons and radar speed check signs. Our main competitors in the Traffic vertical include JS Foster Corporation and Traffic & Parking Control Company Inc.

MANAGEMENT'S DISCUSSION AND ANALYSIS



Our Telematics business is currently focused on designing and manufacturing devices to enable remote monitoring of assets. This vertical was created based on the expected opportunity to utilize our knowledge and expertise in solar and energy management systems to build and/or design solar-powered engines to expand the capabilities of new or existing asset tracking devices.

* Discontinued Operations. As described above and below in Section 4, we divested the Marine and Aviation Obstruction and Airfield Ground Lighting businesses as part of the SPX Divestiture.

Illumination



Our Outdoor Lighting business provides advanced solar powered LED illumination products for pathways, parking lots and streets. Our main competitors in the North American market for outdoor lighting are Solar Electric Power Company, Greenshine Solar Lighting, First Light Technologies, Clear Blue Technologies, Urban Solar and Solar One Solutions Inc. Internationally we have a variety of competitors operating in different areas of the world.

Offshore



Our Offshore Wind business specializes in the provision of comprehensive safety and marking systems for offshore wind farms. Our main offshore wind competitors include Dialight A/S, Tideland Signals, Xylem Inc., Sealite Pty Ltd. and Pharos Marine Automatic Power Ltd.

For the purposes of discussing our operating results in this MD&A, we have presented our financial information based on our continuing operations unless otherwise noted.

In 2018 we continued to make significant progress to focus our business operations, culminating with the divestiture of our Marine, Aviation Obstruction and Airfield Ground Lighting verticals to SPX Corporation for \$77.6 million in cash. The SPX Divestiture was completed on February 1, 2019 and our cash reserves are now approximately \$88.0 million. Due to this recent and material change in our business, Management and the Board of Directors are currently evaluating our go-forward strategy and focus. As such, we have removed disclosure relating to our vision, strategy, tactics, innovation efforts, organic growth prospects, last mile partners and acquisition strategy under "Our Business" section above.

In addition, we have removed the disclosure relating to the key performance measures (previously Section 3), although important, these measures are no longer relevant for comparative purposes in 2018 due to the discontinued operations.

Management and the Board are currently considering how to best invest, or return to shareholders, our cash reserves. Alternatives under consideration include: investments to grow the residual businesses (including research and development spending), acquisitions of other businesses (which may include businesses that support our residual business activities or businesses in new market sectors) and returning cash to Shareholders (by way of a special dividend

MANAGEMENT'S DISCUSSION AND ANALYSIS

or share buy-back). These alternatives, as well as any additional alternatives not presently listed here, may be considered or utilized in whole or in part.

Management and the Board of Directors are also currently considering whether it is necessary for the Company to undertake a reorganization of its operations or restructuring of its businesses described above in order to achieve profitability in the years to come.

INDUSTRY TRENDS AND OUTLOOK

There are a number of industry trends that we expect to impact our businesses. By segment, these include the following:

Signals – Our Signals segment is now primarily focused on our Traffic vertical. The Traffic vertical continues to be a North American market opportunity, in which trends such as smart cities, autonomous cars and connectivity continue to rapidly evolve. We expect this evolution will likely require all signalling products to be connected to data networks and to be monitored and controlled remotely. In addition to providing warning lights, these “connected” devices are likely to be data gateways that provide a variety of sensor data intended to increase safety and further reduce operating costs for our customers. Also reported within our Signals segment is our Telematics vertical, which continues to manufacture the Solar Smart One asset tracking device for GlobalStar. We now consider this vertical to be limited to just this project, with the current manufacturing contract scheduled to expire in 2021.

Illumination – Our Illumination segment continues to be dominated by industry trends such as improving LED, solar panel and battery efficiencies, all of which have an impact on power consumption. Our solar powered outdoor street lighting product, branded EverGen, is able to produce expected light levels for streets, parking lots and pathways. The power requirements for this product are much lower than in the past and are likely to continued to trend lower in the future, making the use of solar powered lighting more economically feasible over time. Accordingly, we expect growth rates for solar outdoor street lighting to increase.

Offshore – Our Offshore Wind segment continues to see global expansion. In the near-term, Europe is expected to dominate the market share, but over the next decade we expect new markets, including Asia and the United States, to become major contributors to offshore wind capacity construction.

3. Non-IFRS Financial Measures

Non-IFRS financial measure, like EBITDA, Adjusted EBITDA and Core Operating Expenditures do not have any standardized meaning under IFRS and therefore may not be comparable to similar measures presented by other issuers.

EBITDA AND ADJUSTED EBITDA

For the twelve months ended December 31, 2018, we are disclosing EBITDA and Adjusted EBITDA, both of which are non-IFRS financial measures, as supplementary indicators of operating performance. We define EBITDA as net income or loss before interest, income taxes, amortization, and non-cash stock-based compensation. Adjusted EBITDA removes unusual or non-operating items from EBITDA, such as merger and acquisition costs, restructuring charges, asset write offs, and foreign exchange gains and losses. We are presenting the non-IFRS financial measures in our filings because we use them internally to make strategic decisions, forecast future results and to evaluate our performance. We are also presenting these measures because we believe that our current and potential investors, and many analysts, use them to assess our current and future operating results and to make investment decisions. EBITDA and Adjusted EBITDA are not intended as a substitute for IFRS measures.

US\$ thousands	Three months ended December 31,		Year ended December 31,	
	2018	2017	2018	2017
Net income/(loss) from continuing operations	387	(671)	(775)	(1,532)
Add/(deduct):				
Interest expense/(income)	(3)	56	99	104
Income taxes recovery	(621)	(451)	(133)	(148)
Amortization	372	235	1,303	912
Non-cash stock-based compensation	73	102	366	566
EBITDA *	208	(729)	860	(98)
Merger and acquisition costs	87	123	201	451
Extraordinary legal costs	-	51	66	372
Other non-recurring expenses/(income)	-	(186)	(61)	987
Foreign exchange (gain)/loss	145	(68)	267	(98)
Adjusted EBITDA *	440	(809)	1,333	1,614
* A Non-IFRS measure defined above				

CORE OPERATING EXPENDITURES

For the three and twelve months ended December 31, 2018, we are presenting Core Operating Expenditures, a non-IFRS financial measure, as a supplementary indicator of operating performance. We define Core Operating Expenditures as operating expenditures excluding non-recurring items, such as the recognition of previously unrecognized investment tax credits or restructuring charges ("Core Operating Expenses"). For the twelve months ended December 31, 2018, Core Operating Expenditures is calculated as the total of sales and marketing, R&D and general and administrative expenses. We are presenting the non-IFRS financial measures in our filings because we use them internally to make strategic decisions, forecast future results and to evaluate our performance. We are also presenting these measures because we believe that our current and potential investors, and many analysts, use them to assess our current and future operating results and to make investment decisions.

4. Operational and Business Highlights

DISCONTINUED OPERATIONS

On October 11, 2016, we announced our intention to divest the Power business segment, which is comprised of our Off-Grid (or Go Power! business) and On-Grid (or Solar EPC business) verticals.

On April 3, 2017, we completed the sale of the On-Grid vertical. The proceeds of the asset sale were \$2.0 million. In October 2018, the Company dissolved Carmanah Solar Power Corporation and settled all outstanding balances within the entity. As a result, the Company reclassified the cumulative amount of other comprehensive income related to foreign currency translation of \$423 thousand for this entity to profit from discontinued operations. Alexander Capital Group Inc. advised on the divestiture.

On August 1, 2017, we completed the sale of assets of the Off-Grid Power business to Valterra Products, LLC, a portfolio company of G. Scott Capital Partners, LLC. The proceeds of the asset sale were \$19.5 million subject to adjustments and holdbacks. A positive working capital adjustment of \$1.1 million was received during the fourth quarter in 2017 based on certain working capital targets as set out in the sale agreement. Beyond the customary final adjustments and holdbacks, \$1.0 million of the \$19.5 million proceeds to be received by the Company was held back and excluded from the cash proceeds, as there is a high probability of this amount not ultimately being collected by the Company due to a tariff obligation that will likely need to be satisfied by the purchaser using these funds. At December 31, 2018, an escrow receivable of \$0.5 million has been recorded under non-trade receivables, this receivable was collected in January 2019. Canaccord Genuity Corp. served as financial advisor and Borden Ladner Gervais LLP acted as legal counsel to Carmanah, respectively.

On December 12, 2018, we announced and entered into a purchase agreement with SPX regarding the sale of a significant portion of Carmanah's assets including all of the issued and outstanding equity interests in its Marine business, the business and assets of the Company's Airfield Ground Lighting business, its Aviation Obstruction Lighting business as well as some miscellaneous business assets that support the businesses sold. The SPX Divestiture was completed on February 1, 2019 for total proceeds of \$77.6 million. As at December 31, 2018 the financial results of these businesses have been classified as discontinued operations and comparative information restated in the Company's 2018 consolidated financial statements.

SUBSTANTIAL ISSUER BID

On October 5, 2017, the Company completed a substantial issuer bid (the "Offer"). The Company took up and paid for 6,000,000 common shares in the capital of the Company (the "Shares") at a price of CAD\$5.00 per Share under the Offer for a total cost of CAD\$30.0 million. The Shares purchased represented 24.09% of the Shares outstanding immediately prior to the purchase. After giving effect to the purchase, the Company had 18,908,019 Shares issued and outstanding.

In total, 14,862,667 Shares were tendered to the Offer. The Shares were taken up on a prorated basis in accordance with the terms of the Offer. Payment for the purchased Shares was completed by Computershare Investor Services Inc. in accordance with the Offer.

NORMAL COURSE ISSUER BID

On June 8, 2018, Carmanah announced that the Toronto Stock Exchange ("TSX") accepted the Company's notice of intention to commence a Normal Course Issuer Bid ("NCIB"), which would allow the Company to purchase up to 1,264,446 of its common shares, representing approximately 10% of its public float as of June 8, 2018. The program commenced on June 13, 2016 and can continue until June 12, 2019 or an earlier date should the Company complete its purchases.

The average daily trading volume of our common shares over the six-month period ending May 31, 2018, as calculated per the TSX rules, was 10,192 common shares. Consequently, under TSX rules, we were allowed to purchase daily, through the facilities of the TSX, a maximum of 2,548 common shares representing 25% of such average daily trading volume, subject to certain exceptions for block purchases. We paid the market price at the time of acquisition of any common shares in accordance with the rules and policies of the TSX and applicable securities laws.

We undertook the NCIB because, in the opinion of our Board of Directors, the market price of our common shares, from time to time, does not fully reflect the underlying value of our business. We believed that in such circumstances, the outstanding common shares represent an attractive investment for us since a portion of our excess cash generated on an annual basis can be invested at a positive risk adjusted return on capital through the Bid.

Under this program, during the year ended December 31, 2018, the Company acquired 240,592 of its common shares at prevailing market prices at the time of the transaction. A total of \$1.4 million CAD (\$1.0 million USD) was used to acquire these shares. All common shares acquired under the NCIB were cancelled and purchases were funded out of our working capital.

ACQUISITION OF EKTA ASSETS

On January 2, 2017, the Company acquired the intellectual rights to a marine aids-to-navigation product line marketed under the EKTA brand from Cybernetica, an Estonian company, which includes assignments to a number of sales and employment contracts, and some manufacturing assets. The purchase price totaled €1.35 million (USD \$1.42 million), with €1.0 million paid on closing and a further €0.35 million to be paid on the first anniversary of the closing date. The €0.35 million payment was executed in January 2018.

A new legal entity, Sabik Oü, was incorporated in Estonia to complete the acquisition.

The acquisition was accounted for using the acquisition method in accordance with IFRS 3 – Business Combinations, with the results of operations consolidated with ours effective January 2, 2017. The results were reported within our Signals segment under our Marine vertical. The rationale for the acquisition was to strengthen our worldwide product portfolio and allow us to provide more comprehensive single-source solutions to our marine customers while increasing our market presence in Europe. The total acquisition related costs were approximately \$0.2 million.

It was announced on December 12, 2018 that Sabik Oü was one of the subsidiaries for which all of the issued and outstanding equity interests would be sold pursuant to the SPX Divestiture (see Section 6.11 for details). Therefore, all assets and liabilities of this subsidiary have been classified as held for sale at December 31, 2018 and comparative disclosures adjusted in the consolidated financial statements.

GLOBALSTAR STRATEGIC AGREEMENT

On August 30, 2016, we announced the signing of a strategic agreement (the "Globalstar Agreement") with Globalstar Inc. ("Globalstar"). Under the terms of the Globalstar Agreement we agreed to collaborate on the design and manufacturing of a new solar powered machine-to-machine satellite solution for Globalstar. In addition, we selected the Globalstar low earth orbiting satellite constellation for remote connectivity of all our strategic products. The Globalstar Agreement includes a multi-year supply agreement whereby we will design, develop, and supply the next generation of Globalstar devices incorporating solar power charging capabilities. The introduction of solar technology supports longer battery life, which also supports a significant increase in data transmission capability on a device by device basis. The first Globalstar products began shipping in the first quarter of 2018.

ACQUISITION OF VEGA INDUSTRIES LTD.

On August 1, 2017, we acquired all of the outstanding and issued common shares of Vega. Vega is a manufacturer in the worldwide marine aids-to-navigation market. The purchase price was NZD \$12.0 million (USD \$9.0 million) subject to adjustments and holdbacks. As part of the transaction, NZD \$2.0 million of the purchase was held in escrow and was contingent on Vega meeting certain revenues targets for its fiscal year ended March 31, 2018. Vega did not meet those targets and we received the full amount held in escrow in the second quarter of 2018.

The acquisition was accounted for using the acquisition method in accordance with IFRS 3 – *Business Combinations*, with the results of operations consolidated with those of the Company. The results were reported within our Signals segment under our Marine vertical. The rationale for the acquisition was to strengthen our worldwide product portfolio and allow us to provide more comprehensive single-source solutions to our marine customers.

With the acquisition of Vega, as described above, a restructuring plan was developed in the latter half of 2017 to complete the integration of Vega into the rest of the Marine business. Under this plan, the Company planned to eliminate Vega's administrative, back office, and manufacturing functions and migrate its manufacturing facility to Finland and Estonia. This transfer was completed in the fourth quarter of 2018 and all remaining assets and liabilities were classified as held for sale. In late 2017 Vega also transferred all of its intellectual property to Sabik Oy and therefore was not divested as part of the SPX Divestiture and remains a wholly owned subsidiary of Carmanah. Accordingly, the Company is in the process of winding up Vega and all costs associated with the wind-up are accounted for in the Company's consolidated financial statements.

ACQUISITION OF INFORMATION DISPLAY COMPANY

On October 2, 2018, the Company acquired all the issued and outstanding common shares of IDC. IDC is a U.S. manufacturer of radar speed signs and other speed displays. The purchase price totaled \$1.5 million paid on closing and is included within the Traffic vertical.

The purchase price allocation for the transaction at December 31, 2018, represents management's best estimates of these values.

SEGMENT REPORTING CHANGES

The Offshore segment of our business was previously included within the Signals segment but due to the SPX Divestiture (see Section 6.11) and the subsequent reclassification of results to discontinued operations as described above and in this Section 4, the Company determined that its Offshore Wind vertical now meets the definition of a reportable segment in accordance with IFRS 8 – *Operating Segments*. A new reportable segment was therefore recognized within continued

operations as presented at December 31, 2018. Segment reporting as at December 31, 2017 has been restated to reflect the new reportable segment identified.

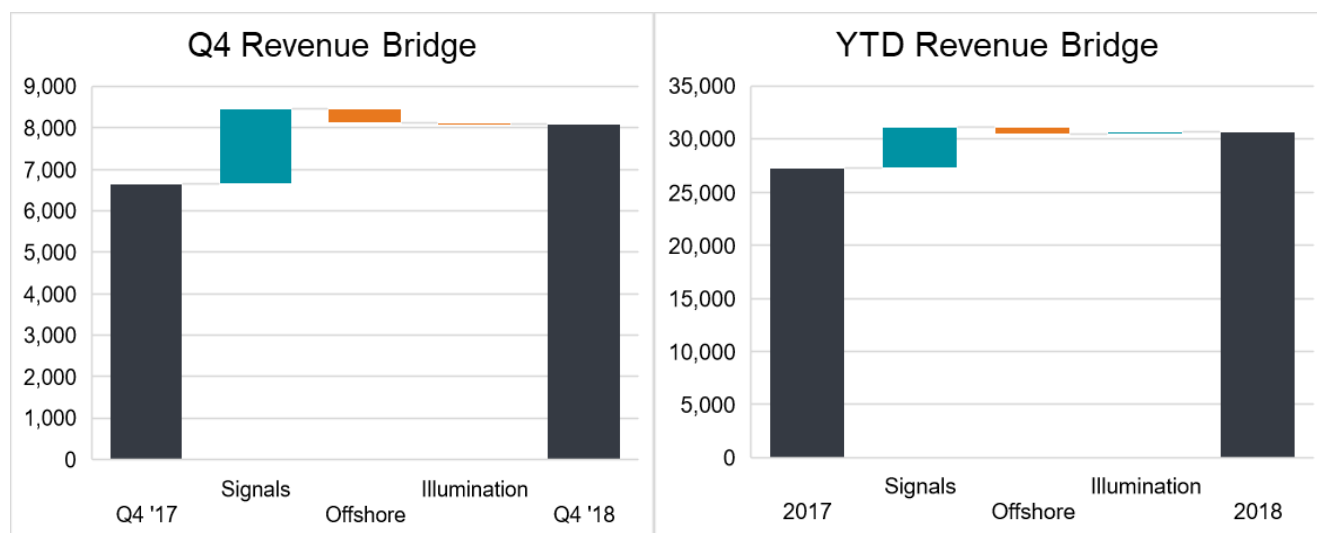
5. Financial Results

As previously noted, the information presented in the sections below have been derived from and should be read in conjunction with our consolidated financial statements for the three and twelve months ended December 31, 2018.

5.1 THREE AND TWELVE MONTHS ENDING DECEMBER 31, 2018 AND 2017

REVENUE

US\$ thousands	Three months ended December 31,			Year ended December 31,		
	2018	2017	Change	2018	2017	Change
Revenues						
Signals	4,544	2,721	67.0%	14,763	10,902	35.4%
Offshore	2,815	3,163	(11.0)%	11,771	12,472	(5.6)%
Illumination	731	768	(4.8)%	4,185	3,939	6.2%
Total revenue	8,090	6,652	21.6%	30,719	27,313	12.5%



MANAGEMENT'S DISCUSSION AND ANALYSIS

Revenues for the three months ended December 31, 2018 were up \$1.4 million, or 21.6%, over the same period in 2017. Revenues for the year ended December 31, 2018 were up \$3.4 million or 12.5% over the prior year. Comparative changes by segment are as follows:

- **Signals** – The increase in revenues in our Signals segment for the fourth quarter of 2018 as well as the twelve month period is due to stronger performance in our Telematics vertical due to the addition of product sales as well as service revenues in 2018 (prior period included only service revenues), while our Traffic vertical revenues also grew in the fourth quarter with the acquisition and integration of IDC.
- **Offshore** – The decrease in Offshore segment revenues during the fourth quarter of 2018 as well as the twelve month period in 2018 relative to the prior year is due to project delays that are expected to shift revenues into future periods.
- **Illumination** – Sales in our Illumination segment were consistent compared to the fourth quarter in 2017 and increased by 6.2% compared to the twelve month period in 2017. We have transitioned from our legacy products to the new EverGen product. During the launch in 2017, several unexpected component shortages substantially restricted our ability to produce and ship. As anticipated, we resumed normal production and delivery lead times in the first quarter of 2018.

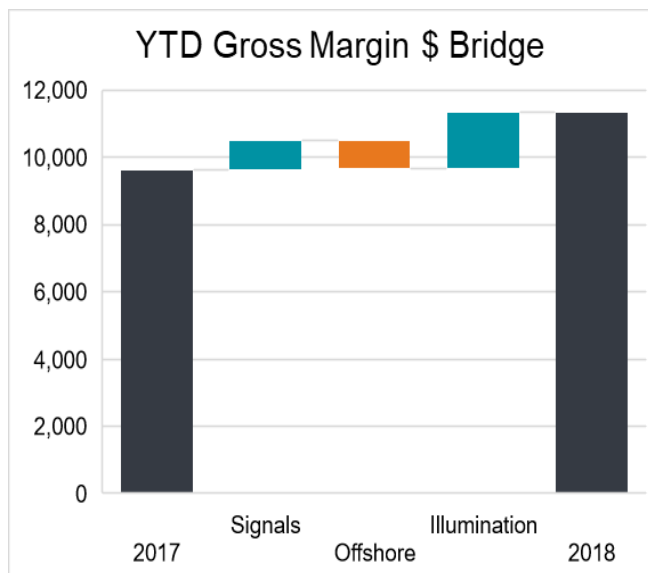
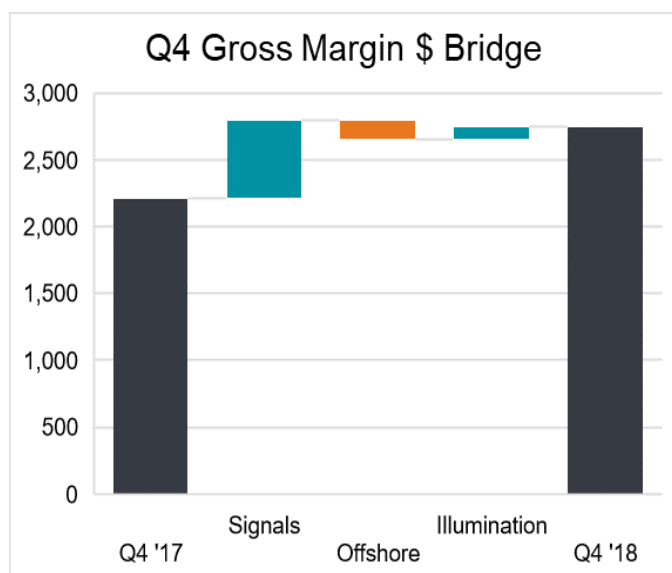
SALES BY GEOGRAPHIC REGION

Approximately 40.3% of our revenues for 2018 were from outside North America, down from 46.6% during the same period in 2017. This decrease can be attributed to the increase in North American product sales for our Telematics vertical combined with a decrease in sales from our Offshore segment in 2018.

MANAGEMENT'S DISCUSSION AND ANALYSIS

GROSS MARGINS

US\$ thousands	Three months ended December 31,			Twelve months ended December 31,		
	2018	2017	Change	2018	2017	Change
Signals						
Gross margin	1,725	1,140	51.3%	5,846	4,988	17.2%
Gross margin %	38.0%	41.9%		39.6%	45.8%	
Offshore						
Gross margin	788	923	(14.6)%	3,846	4,667	(17.6)%
Gross margin %	28.0%	29.2%		32.7%	37.4%	
Illumination						
Gross margin	240	146	64.4%	1,647	(0,008)	n.a
Gross margin %	32.8%	19.0%		39.4%	(0.1)%	
Total Gross margin %	34.0%	33.2%		36.9%	35.3%	



Gross margin percentage for the three months ended December 31, 2018 was 34.0%, up from 33.2% over the same period in 2017. Gross margin percentage for the year ended December 31, 2018 was 36.9%, up from 35.3% over the same period in 2017. Our Illumination segment gross margin percentage increase was primarily due to a \$0.8 million inventory write-down in the 2017 period. The write down consisted of legacy products made obsolete by the development of the new EverGen product offering.

MANAGEMENT'S DISCUSSION AND ANALYSIS

OPERATING EXPENSES

US\$ thousands	Three months ended December 31,			Year ended December 31,		
	2018	2017	Change	2018	2017	Change
Sales and marketing	720	707	1.8%	2,969	2,912	2.0%
R&D	498	653	(23.7)%	1,818	1,540	18.1%
General and administration	1,880	1,859	1.1%	7,409	6,737	10.0%
Total Core Operating Expenditures*	3,098	3,219	(3.8)%	12,196	11,189	9.0%
<i>Non-cash items:</i>						
<i>Amortization</i>	<i>372</i>	<i>235</i>	<i>58.3%</i>	<i>1,303</i>	<i>912</i>	<i>(42.8)%</i>
<i>Stock-based payments</i>	<i>73</i>	<i>102</i>	<i>(28.4)%</i>	<i>366</i>	<i>566</i>	<i>(35.3)%</i>

* Core Operating Expenditures is a Non-IFRS measure which is discussed in section 3.

	Q1 '17	Q2 '17	Q3 '17	Q4 '17	Q1 '18	Q2 '18	Q3 '18	Q4 '18
Sales and marketing	13.0%	10.8%	8.9%	10.6%	9.9%	10.4%	9.6%	8.9%
R&D	6.0%	6.0%	1.5%	9.8%	3.5%	6.9%	7.3%	6.1%
General and administration	27.8%	21.8%	22.2%	28.0%	24.2%	26.0%	23.0%	23.2%
Total Core Operating Expenditures *	46.8%	38.6%	32.6%	48.4%	37.6%	43.3%	39.9%	38.2%

* Core Operating Expenditures is a Non-IFRS measure which is discussed in section 3.

Our total core operating expenses for the fourth quarter of 2018 were \$3.1 million, down 3.8% from the same period in 2017. Total core operating expenses for the year ended December 31, 2018 were \$12.2 million, up 9.0% from the same period in 2017.

SALES AND MARKETING

Our sales and marketing expenses for the fourth quarter and full year 2018 were in line with expectations and prior year.

RESEARCH AND DEVELOPMENT

In the fourth quarter of 2018, our R&D expenses were \$0.5 million, down from \$0.6 million in the same period in 2017 due to a decrease in salaries and related expenses. These expenses for the year were \$1.8 million, up from \$1.5 million in the prior year due to product development activities during the year.

GENERAL AND ADMINISTRATION

In the fourth quarter of 2018, our general and administration expenses were in line with expectations and prior year. These expenses for the year were \$7.4 million up from \$6.7 million over the prior year. The increase was mainly attributable to an increase in amortization costs relating to a patent acquired in 2018 as well as an increase in salaries and related expenses.

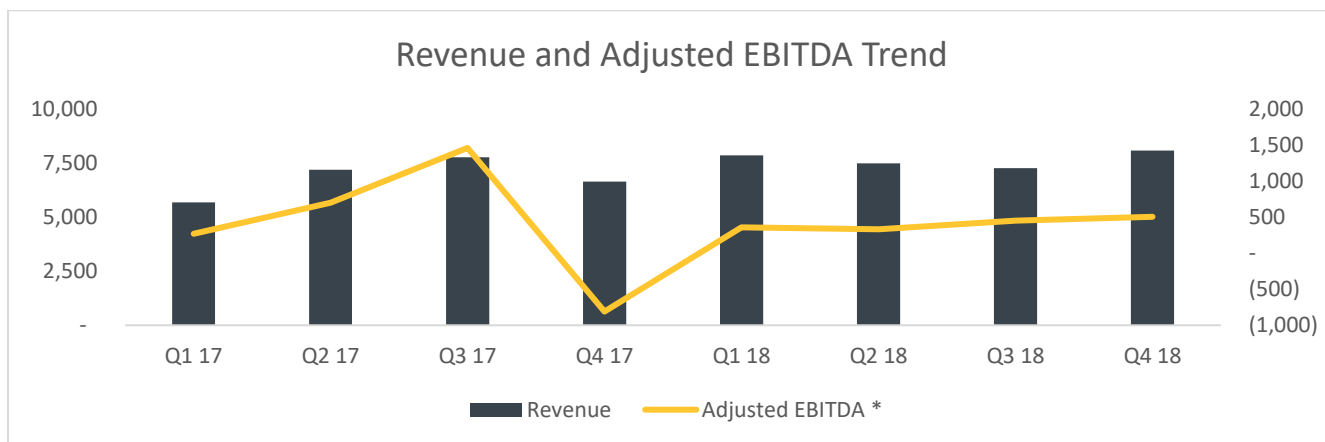
MANAGEMENT'S DISCUSSION AND ANALYSIS

INCOME TAXES

Income tax recovery for the twelve months ended December 31, 2018 was \$0.1 million, comparable to \$0.1 million in 2017.

5.2 QUARTERLY TRENDS

REVENUE AND ADJUSTED EBITDA TREND



US\$ thousands (unless noted)	Q1 '17	Q2 '17	Q3 '17	Q4 '17	Q1 '18	Q2 '18	Q3 '18	Q4 '18
Revenue	5,686	7,196	7,779	6,652	7,859	7,495	7,275	8,090
Gross margin %	41.6%	39.1%	29.1%	33.2%	36.5%	39.3%	38.1%	34.0%
Net Income/(Loss) cont ops	(502)	(100)	(259)	(671)	(247)	(688)	(227)	387
Net Income/(Loss), total ops	1,102	1,024	10,407	(1,182)	474	(278)	(581)	1,328
EPS – Basic, cont ops	(0.02)	0.00	(0.01)	(0.03)	(0.01)	(0.04)	(0.01)	0.02
EPS – Diluted, cont ops	(0.02)	0.00	(0.01)	(0.03)	(0.01)	(0.04)	(0.01)	0.02
EPS – Basic, total ops	0.04	0.04	0.42	(0.06)	0.02	(0.02)	(0.03)	0.09
EPS – Diluted, total ops	0.04	0.04	0.41	(0.06)	0.02	(0.02)	(0.03)	0.09
Adjusted EBITDA ^[1]	268	697	1,458	(809)	309	212	372	440

^[1] EBITDA and Adjusted EBITDA are non-IFRS measures see section 3 for discussion. Comparative quarters have been restated for discontinued operations.

Our quarterly revenues fluctuate within our business segments primarily due to product mix and the nature of our sales within our market segments. A large portion of our revenues are derived from infrastructure projects that often have long tender processes and fluctuating timelines. This is most pronounced within our Offshore Wind and Illumination segments and to a lesser extent within our Signals segment. The following are comments on quarter to quarter changes relating to continuing operations:

MANAGEMENT'S DISCUSSION AND ANALYSIS

- Q1 2017 to Q2 2017 – The decrease in net loss in Q2 2017 of \$0.4 million was primarily attributable to higher revenues in our Traffic vertical.
- Q2 2017 to Q3 2017 – The increase in net loss in Q3 2017 of \$0.2 million is primarily attributable to lower gross margins resulting from a \$0.8 million inventory write-down in the Illumination segment.
- Q3 2017 to Q4 2017 – The increase in net loss in Q4 2017 of \$0.4 million was result of a decrease in revenue across multiple verticals including Offshore, Illumination and Traffic offset by tax recoveries.
- Q4 2017 to Q1 2018 – The decrease in net loss in Q1 2018 of \$0.4 million was the result of increased revenues in our Illumination and Offshore segments.
- Q1 2018 to Q2 2018 – The increase in net loss in Q2 2018 of \$0.4 million was primarily attributable to increased development expenditure.
- Q2 2018 to Q3 2018 – The decrease in net loss in Q3 2018 of \$0.5 million was mainly attributable to lower operating expenses.
- Q3 2018 to Q4 2018 – The increase in net income in Q4 2018 of \$0.6 million is mainly attributable to increased revenue from our Offshore and Telematics verticals as well as tax recoveries.

5.3 SELECT ANNUAL INFORMATION

US\$ thousands (unless noted)	2018	2017	2016*
Revenue (continuing operations)	30,719	27,313	47,742
Gross Margin (continuing operations)	11,339	9,647	20,541
Net Income/(Loss) from continuing operations	(775)	(1,532)	2,917
Net Income/(Loss) per share (Basic / continuing operations)	(0.04)	(0.06)	0.12
Net Income/(Loss) per share (Diluted / continuing operations)	(0.04)	(0.06)	0.12
Net Income/(Loss) from total operations	943	11,351	4,228
Net Income/(Loss) per share (Basic / total operations)	0.05	0.48	0.17
Net Income/(Loss) per share (Diluted / total operations)	0.05	0.47	0.17
Total assets (total operations)	70,837	77,157	86,907
Adjusted EBITDA (continuing operations)	1,333	1,614	7,020

* Annual information for 2016 has not been restated for discontinued operations identified in 2018.

The revenue growth of \$3.4 million from 2017 to 2018 was due to a combination of organic growth and an acquired businesses (non-organic) in the fourth quarter of 2018. The non-organic growth was associated with the acquisition of IDC, which was acquired on October 2, 2018. The organic growth was attributable predominantly to our Telematics vertical within our Signals segment. The growth in the Signals segment was offset by a \$0.7 million decline in our Offshore segment.

6. Liquidity, Capital Resources and Other Disclosures

6.1. SUMMARY OF CONSOLIDATED STATEMENT OF CASH FLOWS

US\$ thousands	Twelve months ended December 31,		
	2018	2017	CHANGE
Net cash (used)/provided in operating activities	(5,080)	3,909	(n.a.)
Net cash provided by investing activities	264	9,189	(97.1)%
Net cash used in financing activities	(7,679)	(23,493)	(67.3)%
Net effect of exchange rate changes on cash	(68)	417	(n.a.)
Total decrease in cash from continuing operations	(12,563)	(9,978)	(25.9)%

CASH (USED)/PROVIDED IN OPERATING ACTIVITIES

During the year ended December 31, 2018, cash provided by our operating activities, excluding changes in non-cash working capital, was \$1.0 million, down from \$2.6 million for the prior year. This is largely due to use of investment tax credits in 2017 offset by improved earnings before taxes in 2018. We actively manage our working capital by monitoring inventory turnover data, collection of accounts receivable, and taking advantage of trade discounts and/or extended payment terms granted by suppliers.

CASH PROVIDED/USED IN INVESTING ACTIVITIES

During year ended December 31, 2018, cash provided by investing activities was \$0.3 million, down from cash provided by investing activities of \$9.2 million in the same period in 2017. The decrease in 2018 is primarily due to the receipt of proceeds for the sale of Off-Grid in the 2017 period partially offset by cash flows relating to the acquisition of Vega.

CASH PROVIDED/USED IN FINANCING ACTIVITIES

During the twelve months ended December 31, 2018, cash used in financing activities was \$7.7 million, compared to \$23.5 million in the same period in 2017. The 2017 period includes a share repurchase of \$24.0 million.

MANAGEMENT'S DISCUSSION AND ANALYSIS

6.2 LIQUIDITY AND CAPITAL RESOURCE MEASURES

On December 31, 2018, our overall working capital was \$42.9 million, up from \$21.2 million at December 31, 2017. The increase is mainly due to the reclassification of assets held for sale in 2018.

In the past, our primary source of liquidity has been from equity issuances and, to a lesser extent, our credit facility, which is discussed in the section below. We believe we have ample capital resources and liquidity for our current business for the foreseeable future.

6.3 CREDIT FACILITIES

In early 2015, we signed a new credit facility (the "Facility") with Canadian Imperial Bank of Commerce ("CIBC"). The Facility provided credit up to \$25.75 million through: (1) a \$10 million 364-day revolving credit, (2) a \$10 million term acquisition credit facility, (3) \$3.75 million for letters of credit and (4) \$2.0 million for trading room and other liabilities. Our ability to draw on the 364-Day revolver, the credit for the letters of credit, and credit for trading room contingent liabilities is subject to certain covenants. Access to the term acquisition credit facility required CIBC's review and approval of the specific acquisition transaction.

On July 24, 2017, the Company amended the credit facility with CIBC (the "CIBC Facility"). The CIBC Facility provides up to \$25.5 million through: (1) a \$10.0 million 364-day revolving credit facility, expiring June 15, 2018, (2) a \$15.0 million revolving term acquisition credit Facility and (3) \$0.5 million for trading room on contingent liabilities. The Company's ability to draw on the 364-day committed revolving credit, revolving term acquisition credit, and credit for trading room contingent liabilities is subject to borrowing covenants and conditions typical to these credits. Each of the credits have separately applicable interest rates. During the first six months of 2018, we repaid all of the outstanding loan under the 364-day revolving credit facility. At December 31, 2018, there was (1) \$3.8 million available under the 364-day revolving credit facility, (2) \$15.0 million available under the revolving term Acquisition credit facility and (3) \$0.5 million available for trading room on contingent liabilities.

In March 2016, our German subsidiary, Sabik Offshore GmbH, secured a new credit facility with Deutsche Bank (the "Deutsche Facility"). The Deutsche Facility provides credit up to \$3.6 million through a \$2.4 million of revolving credit facility and \$1.2 million for guarantees and was secured to support ongoing working capital needs. Interest on the revolving credit facility is variable and is based on the Euro Interbank Offered Rate plus 1.5%. The Deutsche Facility has been guaranteed through a \$2.4 million letter of credit issued on the CIBC Facility and a security over inventory within Sabik Offshore GmbH. At December 31, 2018, no amounts were drawn on the revolving credit facility.

6.4 CONTRACTUAL OBLIGATIONS AND COMMITMENTS

We utilize several contract manufacturers who build and supply our manufactured products. Our agreements with these contract manufacturers generally require us to be liable for inventory and outstanding committed purchase orders required to support our business. If one of these agreements is terminated, we would be required to purchase the associated underlying inventory or arrange for a new contract manufacturer to acquire and hold it in a similar capacity. At present, we have relationships with two significant contract manufacturers. Under the terms of the contract manufacturing agreements, we are required to purchase excess raw inventory in situations where our demand forecasts for individual products is less than actual purchases. At December 31, 2018, the contract manufacturers held approximately \$1.0 million (December 31, 2017 - \$1.5 million) in inventory and \$1.0 million (December 31, 2017 - \$1.2 million) in outstanding committed purchase orders.

MANAGEMENT'S DISCUSSION AND ANALYSIS

We have several operating leases that cover facilities and equipment as well as committed contracts covering various IT services. The following table outlines the minimum amounts due under these agreements in future years as at December 31, 2018.

	Facility Leases	IT Services	Vehicle Leases	Equipment Leases	Total
Not later than 1 year	307	41	52	7	407
2 years to 3 years	353	-	45	15	413
Greater than 3 years	-	-	4	6	10
Total	660	41	101	28	830

6.5 CLAIMS AND LAWSUITS

On July 18, 2013, the Company was named in a United States District Court lawsuit filed by R.D. Jones, Stop Experts, Inc., and RRFB Global, Inc. (collectively the "Plaintiffs") alleging patent infringement with respect to a specific flash pattern used in our solar powered flashing beacons for the traffic safety market and other claims relating to advertising and business practices. On March 20, 2018, the Company purchased the patents in question from R.D. Jones for a total price of \$2.4 million to be paid over a 4-year period. The unpaid portion of this payable has been treated as a non-cash transaction in the Company's consolidated statement of cash flows. As a result of this purchase, this matter is considered closed with no further obligations by either party.

The Company's wholly owned subsidiary, Carmanah solar Power Corp. ("CSPC"), of which assets were sold along with the On-Grid vertical as described in Note 18 of the audited consolidated financial statements for the year ended December 31, 2017, contracted with Hydro Ottawa Holding Inc. ("Hydro Ottawa") for the design and build of eight solar power projects totaling \$4.8 million. These contracts were largely completed and invoiced when on January 3, 2017 Hydro Ottawa served notice to terminate the contract citing project delays. Subsequently, on June 21, 2017, Hydro Ottawa provided notice that it would incur costs of between \$0.9 million and \$1.0 million to fully complete the contracts. CSPC disputed these amounts as it believed that the work required to complete and test the projects was inconsequential. Hydro Ottawa was also seeking an additional amount for liquidated damages in the amount of \$0.9 million and an additional amount for lost revenue in the amount of \$0.7 million. This receivable, along with several others was not sold along with the rest of the assets of CSPC and was retained by the Company. On March 14, 2018, CSPC entered into a settlement with Hydro Ottawa. As a result of the resolution, Carmanah incurred a one-time charge of \$1.7 million, negatively impacting the net income from discontinued operations in the fourth quarter of 2017. This matter is considered closed with no further obligations by either party.

In June 2017, the Company was named in an Ontario Supreme Court claim filed by Ameico Enterprise under the Construction Lien Act stating a breach of trust for failure to pay contracts for change orders in the amount of \$0.7 million. The lawsuit seeks to recover legal expenses, interest on amounts owing and damages. As at December 31, 2018, the Company has recorded a provision of \$0.3 million as this represents the Company's best estimate as to the likely amount that will be paid in order to settle this claim, including legal costs.

In August 2018, the Company was served with a legal claim in which it was named as a defendant in a case filed in the Circuit Court of Cook County, Illinois by the administrator of the estate of an individual who was killed in a boating accident

MANAGEMENT'S DISCUSSION AND ANALYSIS

in 2016. The plaintiff alleges, among other things, that the Company was negligent in the design, manufacture or sale of a marine lantern that was installed near the site of the accident. The Company denies any liability and is defending the case in cooperation with its insurers. The Company has concluded no provision is required as at December 31, 2018.

In the ordinary course of our business, we may become involved in various claims and legal proceedings seeking monetary damages and other relief in addition to those matters outlined above. Due to the inherent risks and uncertainties of the litigation process, we cannot predict the final outcome or timing of claims and legal proceedings. Based on information currently available, and following consultation with our legal advisors and insurance providers and management's assessment of the merits of the claims and legal proceedings pending at December 31, 2018, we believe that the ultimate resolution of these claims and legal proceedings is not likely to have a material and negative effect on our financial statements or operations. No provision is or will be included in the Company's financial statements for such claims and legal proceedings until such time as management determines that it is probable that a claim will result in an outflow of economic resources.

6.6 CONTINGENT LIABILITY

We have entered into agreements with third parties that include indemnification provisions that are customary in the industry. These indemnification provisions generally require us to compensate the other party for certain damages and costs incurred as a result of third party claims or damages arising from these transactions. The maximum amount of potential future indemnification is unlimited; however, we currently hold commercial and product liability insurance. This insurance limits our exposure and may enable us to recover a portion of any future amounts paid. Historically, we have not made any indemnification payments under such agreements and we believe that the fair value of these indemnification obligations is minimal. Accordingly, we have not recognized any liabilities relating to these obligations for any period presented.

6.7 OFF BALANCE SHEET ARRANGEMENTS

We have not entered any off-balance sheet arrangements other than standard office/facility lease agreements and vendor managed inventory as noted under section 6.4, Contractual obligations and commitments.

6.8 FINANCIAL INSTRUMENTS AND OTHER INSTRUMENTS

The fair value of our accounts receivable, accounts payable and accrued liabilities approximates their carrying value due to the immediate or short-term maturity of these financial instruments.

We are exposed to foreign exchange risks as we transact business and have working capital denominated in multiple currencies. We attempt to minimize our exposure through managing our working capital and entering foreign exchange products or contracts when and where appropriate. As of December 31, 2018, the Company has contracts to purchase a total amount of \$1.85 million Canadian dollars at any time during 2019 at guaranteed rates in exchange of \$1.44 million U.S. dollars. These contracts were entered into for the purpose of meeting operational needs and not as speculative investments. The unrealized mark-to-market loss of \$0.03 million as of December 31, 2018 has been included as other current liabilities on the Consolidated Statement of Financial Position

6.9 RELATED PARTY TRANSACTIONS

During the first quarter of 2017, the Company settled an outstanding receivable of \$0.08 million from a former director of the Company which originally arose from a warranty indemnity related to the acquisition of Sol. The settlement resulted in the write-off in the amount of \$0.04 million of the receivable balance, with the remaining \$0.04 million collected on April 24, 2017.

In relation to the change of the Board in 2017, the Company agreed to pay \$0.1 million of the associated legal costs incurred by a former director.

In 2017, the Company purchased \$1.0 of inventory from a vendor in which the previous Chairman of the Board had significant influence. The relationship with this vendor existed prior to the Chairman's appointment and there were no special terms because of this relationship. At December 31, 2018, the associated amounts owing in trade and other payables was nil (December 31, 2017: \$ nil).

Excluding key management compensation as disclosed in the Annual financial statements, there were no additional related party transactions in 2018.

6.10 PROPOSED TRANSACTIONS

None.

6.11 SUBSEQUENT EVENTS

On February 1, 2019, the Company completed the sale of its Marine business, the business and assets of the Company's Airfield Ground Lighting business, its Aviation Obstruction business as well as some miscellaneous assets that support these businesses to SPX Corporation ("SPX"). The proceeds of the sale were \$77.6 subject to finalizing working capital adjustments. Management is in the process of determining the financial effect of the sale.

The SPX Divestiture was announced and a purchase agreement was signed on December 12, 2018, and approved by a special resolution of the Company's shareholders on January 22, 2019.

Management and the Board are currently considering how to best invest, or return to shareholders, our cash reserves. Alternatives under consideration include: investments to grow the residual businesses (including research and development spending), acquisitions of other businesses (which may include businesses that support our residual business activities or businesses in new market sectors) and returning cash to Shareholders (by way of a special dividend or share buy-back). These alternatives, as well as any additional alternatives not presently listed here, may be considered or utilized in whole or in part.

The outstanding escrow receivable balance of \$0.5 million relating to the disposal of our Off-Grid division and included in non-trade receivables at December 31, 2018, was received in February 2019.

MANAGEMENT'S DISCUSSION AND ANALYSIS

OUTSTANDING SHARE DATA

Our Shares trade on the Toronto Stock Exchange under the symbol "CMH", and as at December 31, 2018 we had 18,859,877 fully issued and outstanding Shares. The following table summarizes the outstanding Shares, options and other outstanding stock units stated in CAD\$.

	March 27, 2019	December 31, 2018	June 30, 2018	March 31, 2018	December 31, 2017
Share price – closing	6.67	6.00	4.90	4.40	4.65
Market capitalization (in thousands)	125,795	113,159	93,122	83,258	87,988
Outstanding					
Shares	18,859,877	18,859,877	19,004,528	18,922,210	18,922,210
Options	1,485,294	1,491,294	1,588,443	1,680,053	1,686,129

7. Critical Accounting Estimates and Accounting Policy Developments

7.1 CRITICAL ACCOUNTING ESTIMATES

Our financial statements are prepared in accordance with IFRS. The application of IFRS requires that we make estimates that affect our reported amounts of assets and liabilities and the disclosure of contingencies at the date of the financial statements and the reported amounts of revenues and expenses during the period. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ significantly from these estimates. Unless otherwise noted the estimates are inclusive of all our reportable market segments described in Section 2 including those operations which were discontinued pursuant to the SPX Divestiture.

The significant accounting policies and estimates are discussed below:

Accounting	Estimates
Forfeiture rates associated with share-based payments	In determining share-based payments expense, we make estimates related to forfeiture rates, volatility and expected term for each specific grant. Forfeiture rates are used to estimate the number of awards that are expected to vest considering employee turnover rates. Expected volatility has been based on an evaluation of the historical volatility of the Company's share price, particularly over the historical period that commensurate with the expected term. The expected term of the instruments is estimated based on historical experience and general option holder behavior. The changes in estimates are recognized in the Consolidated Statements of Income and Total Comprehensive Income in the year that they occur. Current forfeiture rates applied to grants range from 14% to 26% and vary depending upon the employee make-up of the associated grants.
Impairment of assets	Each year the Company makes significant judgments in assessing if goodwill, tangible or intangible assets have suffered an impairment loss. The Company's impairment analysis involves the determination of identification of cash generating unit ("CGU"). The use of an income approach is applied that relies on estimating the future net cash flows and applying the appropriate discount rate to those future cash flows. Significant management judgment is necessary to evaluate the impact of operating and economic changes on each CGU or underlying asset. Critical assumptions include projected sales growth and market opportunities, future profitability of system sales, operating and administrative expense, capital expenditures, an appropriate discount rate, and in some situations, the cost of disposal. Non-current assets classified as held to sale are recorded at the lower of its carrying value or fair value less costs to sell. Management judgment is necessary to evaluate the fair value less costs to sell and critical assumptions include market opportunities and costs to sell. During the fiscal years ended December 31, 2018 and 2017, there were no impairment losses. Our impairment analysis at December 31, 2018 involved the use of income approach that relied on estimating the future net cash flows and applying an appropriate discount rate to those future cash flows. This approach employed the following key assumptions: anticipated sales growth in key markets, changes in gross margins due to pricing changes for materials and the cost of manufacturing, changes in

Accounting Estimates

operating and administrative expenses, anticipated capital expenditures, and an appropriate discount rate. The forecast period utilized in the analysis covered 2019 through 2023. For the assessment of the goodwill and intangibles acquired in the Sabik Group acquisition specifically relating to our Offshore segment, key drivers included anticipated sales growth estimated between 1% and 66.2% for the next five years, a terminal growth rate of 1% and a weighted average cost of capital of 20%. The results of the analysis indicated an excess over carrying value of \$6.3 million. For the assessment of the goodwill and intangibles acquired in the Sol acquisition, key drivers included anticipated sales growth estimated between 14.6% and 18.7% for the next five years, a terminal growth rate of 2% and a weighted average cost of capital of 12.2%. The results of the analysis indicated an excess over carrying value of \$1.0 million. For the assessment of the goodwill and intangibles acquired in the IDC acquisition, key drivers included anticipated sales growth of 5% for the next five years, a terminal growth rate of 2% and a weighted average cost of capital of 12.2%. The results of the analysis indicated an excess over carrying value of \$13.5 million.

Income Tax Carmanah calculates income tax provisions in each of the jurisdictions in which it operates. Actual amounts of income tax expense only become final upon filing and acceptance of the tax return by the relevant authorities, which occurs subsequent to the issuance of the financial statements. Additionally, estimation of income taxes includes evaluating the recoverability of deferred tax assets based on an assessment of the ability to use the underlying tax deductions before they expire against future taxable income. The assessment is based upon existing tax laws and estimates of future taxable income. To the extent estimates differ from the final tax returns, earnings would be affected in a subsequent period.

Assets and liabilities acquired in business combinations In a business combination, Carmanah may acquire the assets and assume certain liabilities of an acquired entity. The estimate of fair values for these transactions involves judgment in determining the fair values assigned to the tangible and intangible assets (e.g. technology, brand, order backlog, etc.) acquired and the liabilities assumed on the acquisition. The determination of these fair values involves a variety of assumptions, including estimates surrounding costs to acquire or reproduce a similar asset, expected cash flows, discount rates, etc. Contingent consideration resulting from business combinations is recorded at fair value at the acquisition date as part of the business combination based on expected discounted cash flows, and is subsequently remeasured to fair value at each reporting date with any subsequent change in fair value recognized in the Consolidated Statements of Income and Total Comprehensive Income.

7.2 ADOPTION OF NEW ACCOUNTING STANDARDS

The significant accounting policies that have been applied, on a consistent basis, in the preparation of these consolidated financial statements are included in the Company's audited consolidated financial statements for the year ended December 31, 2018. Those accounting policies have been used throughout all periods presented in the condensed consolidated interim financial statements, except as noted below.

IFRS 15 – REVENUE FROM CONTRACTS WITH CUSTOMERS

IFRS 15, Revenue from Contracts with Customers ("IFRS 15") – replaces IAS 18, Revenue, IAS 11 Construction Contract and related interpretations. Under IFRS 15, revenue is recognized when a customer obtains control of the goods. Determining the timing of the transfer of control, at a point in time, over time, requires judgement.

IFRS 15 contains a single model that applies to contracts with customers and two approaches to recognizing revenue: at a point in time or over time. The model features a contract-based five step analysis of transactions to determine whether, how much, and when revenue is recognized. The new standard applies to contracts with customers. It does not apply to insurance contracts, financial instruments or lease contracts, which fall in the scope of other IFRSs. The standard became effective for annual periods beginning on or after January 1, 2018, which is the date the Company adopted IFRS 15.

The Company has adopted IFRS 15 using the cumulative effect method (without practical expedients), with the effect of initially applying this standard at the date of initial application. Accordingly, the information presented for 2017 has not been restated. It is presented, as previously reported, under IAS 18. The adoption of the new standard does not have a material impact on the Company's financial statements, however disclosures have been updated to reflect the requirements of the standard.

IFRS 9 – FINANCIAL INSTRUMENTS

IFRS 9, Financial Instruments ("IFRS 9") – replaces IAS 39, Financial Instruments: Recognition and Measurement ("IAS 39"). IFRS 9 simplifies the classification and measurement requirements for financial instruments, which replaces the multiple classification and measurement models in IAS 39. The standard became effective for annual periods beginning on or after January 1, 2018, which is the date the Company adopted IFRS 9.

IFRS 9 largely retains the existing requirements in IAS 39 for the classification and measurement of financial liabilities. However, it eliminates the previous IAS 39 categories for financial assets of held to maturity, loans and receivables and available for sale. Under IFRS 9, financial assets are classified and measured based on the business model in which they are held and the characteristics of their contractual cash flows. The standard introduces additional changes relating to financial liabilities. It also amends the impairment model by introducing a new "expected credit loss" model for calculating impairment.

IFRS 9 also includes a new general hedge accounting standard which aligns hedge accounting more closely with risk management. This new standard does not fundamentally change the types of hedging relationships or the requirement to measure and recognize ineffectiveness; however, it provides more hedging strategies that are used for risk management to qualify for hedge accounting and introduces more judgement to assess the effectiveness of a hedging relationship.

The adoption of this standard did not have a material impact on the measurement of the Company's financial instruments, however additional disclosures have been provided in the consolidated financial statements.

ACCOUNTING STANDARDS ISSUED BUT NOT YET EFFECTIVE

Certain pronouncements have been issued by the International Accounting Standards Board or the International Financial Reporting Interpretations Committee that will become effective in future accounting periods. The following is a summary of significant standards that may have an impact on the Company's future financial statements.

IFRS 16 replaces IAS 17. Under IFRS 16, a lease will exist when a customer controls the right to use an identified asset as demonstrated by the customer having exclusive use of the asset for a period of time. IFRS 16 introduces a single accounting model for lessees and all leases will require an asset and liability to be recognized on the Statement of Financial Position at inception. The accounting treatment for lessors will remain largely the same as under IAS 17. The standard is effective for annual periods beginning on or after January 1, 2019.

IFRS 16 can be applied using one of the following methods:

- Retrospectively to each prior reporting period presented applying IAS 8, Accounting Policies, Changes in accounting estimates and Errors; or
- Retrospectively with the cumulative effect of initially applying IFRS 16 recognized in retained earnings at the date of initial application (the "Modified Retrospective Approach").

The Company has elected to apply IFRS 16 using the Modified Retrospective Approach. Under this approach, the comparative information will not be restated and the cumulative effect of initially applying IFRS 16 will be recognized in retained earnings at the date of initial application.

The Company will use the following practical expedients permitted by the standard:

- the use of the modified retrospective approach with no restatement of prior periods. For contracts previously classified as operating leases, the Company has elected for the right-of-use asset to equal the lease liability, adjusted for any prepaid amount; and
- the election not to recognize leases for which the underlying asset is of low value.

Where the Company is the lessee for leases that are considered operating leases under IAS 17, the adoption of IFRS 16 on January 01, 2019 will result in the recognition of a right of use asset and liability on the consolidated statement of financial position. The change to the recognition, measurement and presentation requirements from the adoption of this standard will result in a decrease of the Company's operating lease expense and an increase of its finance and amortization expenses. At December 31, 2018 the Company estimates that the anticipated impact of the adoption of this standard will be less than \$1 million as a result of the creation of a new right-of-use asset and lease liability.

7.3 DISCLOSURE CONTROLS AND INTERNAL CONTROLS OVER FINANCIAL REPORTING

DC&P have been designed to provide reasonable assurance that information required to be disclosed is accumulated and communicated to management as appropriate to allow timely decisions regarding required disclosure. Internal control over financial reporting ("ICFR") have been designed to provide reasonable assurance regarding the reliability of financial reporting. Pursuant to Multilateral Instrument 52-109, the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO") are responsible for over-seeing the establishment and maintenance of DC&P as well as internal controls over financial reporting.

DISCLOSURE CONTROLS

Our officers and management have evaluated the effectiveness of our DC&P as at December 31, 2018 as required by Canadian securities laws. The evaluation approach involved looking at the size, nature and state of development of the business and thus used a top down risk-based approach to focus evaluation on areas that were deemed to provide the greatest risk to a material misstatement. Our evaluation also considered our corporate disclosure procedures and the functioning of our CEO, CFO, other executive officers, management, Board, and Audit Committee. Based on this evaluation, our CEO and CFO concluded that the Company's DC&P were effective, at a reasonable assurance level, to ensure that material information relating to the Company and its consolidated subsidiaries would be made known to them by others within those entities, particularly during the period in which the MD&A and the consolidated financial statements contained in this report were being prepared.

INTERNAL CONTROL OVER FINANCIAL REPORTING

Management is responsible for establishing and maintaining adequate ICFR. ICFR is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. Due to its inherent limitations, ICFR may not prevent or detect misstatements. Management has assessed the effectiveness of the Company's ICFR using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control – Integrated Framework (2013). Based on this assessment, management has determined that the Company's ICFR was effective as of December 31, 2018.

Risks and Risk Management

During operations, we are exposed to various business risks and uncertainties that can affect our financial condition. While some financial exposures are reduced through insurance, hedging and other risk management measures we have in place, there are certain cases where the market and operating risks are driven by external factors beyond our influence and control. A discussion of certain risks that may affect us is included in our MD&A and annual information form for the year ended December 31, 2018 filed on SEDAR at www.sedar.com.

Area of Risk	Description
Competitive Environment	<p>The competitive environment varies between our different business segments and thus includes companies who (1) design, manufacture, sell and/or install lighting devices and signals, and (2) provide grid-connected or off-grid power solutions. We compete based on product performance, product features, price, quality and post-installation product support. Our ability to compete successfully depends on factors within and beyond our control, including successful and timely development of new products, product performance and quality, product availability, intellectual property protection obtained by us and our competitors, customer service, pricing, industry trends and general economic trends. We anticipate that certain competitors may transition to solar lighting in the future. If and/or when this transition occurs, the greater name recognition and financial resources of these competitors may make it difficult for us to compete.</p> <p>To be successful, we will need to keep pace with rapid changes in lighting and signaling technology, changing customer requirements, new product introductions by competitors and evolving industry standards, any of which could render our existing products obsolete if we fail to respond in a timely manner. Development of new products incorporating advanced technology is a complex process subject to numerous uncertainties. We have in the past experienced, and could in the future experience, delays in introduction of new products. If others develop superior innovative proprietary lighting technology our competitive position may be harmed and it may not achieve sufficient growth in revenue to attain, or sustain, profitability.</p>
Competition with Other Energy Sources	<p>Off-grid LED lighting products compete with products powered by conventional energy and other sources of renewable energy. There is a risk that similar products with alternative power sources will enjoy greater policy support or provide a more cost-effective alternative to conventional lighting than our products.</p>
Technological Changes	<p>Our products rely on us keeping pace with technological changes. Failure to keep pace with state-of-the-art technologies and methodologies may have a materially adverse effect on our results. Evolving industry standards and/or customer needs may influence demand for our products. Our products may be rendered obsolete or less marketable due to technological</p>

MANAGEMENT'S DISCUSSION AND ANALYSIS

advances made by competitors. To maintain our current market share, we may have to make substantial investments in product innovation and development.

Anticipated Adoption Rates for Solar LED Lighting	While we have invested heavily in the development of solar LED lighting products, this technology is still in its early stages. If the rate of solar LED lighting adoption is slower than the anticipated commercial trends and we are unable to meet the forecasted sales volumes, we may not generate sufficient revenues to sustain profitability. In addition, demand for solar LED lighting products in our targeted markets may not develop or may develop to a lesser extent than anticipated
---------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Ability to Manage Expansion Effectively	We expect to expand our business in the future to meet the anticipated growth in demand for solar LED lighting products. If we are unable to manage growth effectively, we may not be able to take advantage of market opportunities, execute our business strategy or respond to competitive pressures. To manage the potential growth of our operations, we may be required to improve operational systems and procedures and expand our relationships with suppliers, manufacturers, distributors and customers. There can be no assurance that the current and planned operations, personnel, systems and internal procedures will be adequate to support future growth.
-----------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Foreign Exchange	We have exposures to foreign currency fluctuations, most significantly between the US and Canadian dollar and the US dollar and the Euro. At present our functional and reporting currency is the US dollar, as a significant portion of our sales and cost of sales is denominated in US dollars. However, a significant portion of our operating costs are denominated in Canadian dollars and we generally finance in Canadian dollars as well. As a result, we are exposed to US/Canadian dollar fluctuations which may negatively impact our results. At present a lower Canadian dollar positively impacts our results. As of December 31, 2018, Carmanah entered into contracts to purchase a total amount of \$1.85 million Canadian dollars at any time during 2018 at guaranteed rates in exchange of \$1.44 million U.S. dollars. These contracts were entered into for the purpose to meet operational needs and not used as speculative investments. We are also exposed to fluctuations in the Euro relative to the US dollar as a large portion of our wholly owned subsidiaries business is transacted in Euro.
------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

MANAGEMENT'S DISCUSSION AND ANALYSIS

Reliance on Third Party Manufacturers

We rely upon third party manufacturers and suppliers to provide certain underlying components and finished goods. While we try to maintain good relationships with suppliers and contractors, economic, political or other outside factors or changes in our demand may lead to an inability for the providers to fulfill our needs. This may include products not meeting specifications, a failure to meet demand could harm our operations and profitability. Should a manufacturer or supplier suffer financial difficulties or any other disruption in manufacturing capacity, we may not be able to secure adequate substitute manufacturing sources for our products in a timely manner. While we believe we have sufficient access to manufacturing capacity to meet current and expected future requirements, it is possible that future capacity needs will not be available. Additionally, as we rely on third party manufacturers, we are subject to risks associated with limited control over delivery schedules, reductions in capacity, the possibility of defects, the possibility of increased products costs and variable product quality.

Additional risks in this area also occur when we transition between manufacturers or when we close any manufacturing facility we may acquire through an acquisition.

Reliance on Suppliers

Some of the components required to produce our products are custom-made or are manufactured by a small number of suppliers. We may experience interruption in supply of certain components or be unable to re-source the supply from another supplier or re-design products to preclude the need for such components when and if needed.

Some of the companies which we purchase components from directly or indirectly compete with us. Our ability to compete may be adversely affected if some or all of its suppliers were to restrict the supply or increase the cost of the components sold to us, develop products in competition with us, be acquired by a competitor, or form collaborative efforts with other competitors.

Reliance on Outside Agents and Distributors

Market penetration of our products heavily depends on the success levels of our distributors and sales agents. There can be no assurances that we will successfully develop and maintain such alliances or that the sales efforts of our distributors and sales agents will be successful.

To increase sales and margins, we are in the process of developing additional and more direct routes to market. These plans may result in channel conflict which could negatively impact our sales.

Reliance on Key Employees

Our success depends on our continued ability to identify, attract, hire, train, retain and motivate highly skilled technical, managerial, manufacturing, administrative and sales and marketing personnel. To a significant extent, our success will depend on our senior management team. Competition for these individuals is intense and we may not be able to successfully recruit, assimilate or retain sufficiently qualified personnel. We may encounter difficulties in recruiting and retaining enough qualified technical personnel, which could harm our ability to develop

MANAGEMENT'S DISCUSSION AND ANALYSIS

new products and adversely impact our relationships with existing and future customers and affect our future growth and profitability.

Intellectual Property Risks

Many of our products employ new and innovative technologies. Although we are careful to ensure we have the right to the technology utilized in our products we face the risk of infringing on the patents of others. We pursue a strategy of protecting the technology we develop through a combination of patent, copyright, trademark and trade secret laws, employee and third party nondisclosure agreements and similar means. Despite our efforts, other parties may attempt to disclose, obtain or use our technologies. Competitors may also be able to independently develop products that are substantially equivalent or superior to our products or design around our patents. In addition, the laws of some foreign countries do not protect proprietary rights as fully as do the laws of Canada. As a result, we may not be able to protect our proprietary rights adequately in Canada or abroad.

Because our patent position involves complex legal, scientific, and factual questions, the issuance, scope, validity and enforceability of our patents cannot be predicted with certainty. Our issued patents may be invalidated or their enforceability challenged, they may be designed around, and they may not provide us with competitive advantages against others with similar products and technology. Furthermore, others may independently develop similar products or technology or duplicate or design around any technologies that we have developed.

We have received and may receive again in the future, notices that claim we have infringed upon the intellectual property of others. Even if these claims are not valid, they could subject us to significant costs and could materially harm our business. Litigation may be necessary in the future to enforce our intellectual property rights or to determine the validity and scope of the proprietary rights of others. Litigation may also be necessary to defend against claims of infringement or invalidity by others. An adverse outcome in litigation or any similar proceedings could subject us to significant liabilities to third parties, require us to license disputed rights from others or require us to cease marketing or using certain products or technologies. We may not be able to obtain any licenses on acceptable terms, if at all. We also may have to indemnify certain customers if it is determined that we have infringed upon or misappropriated another party's intellectual property. Any of these results could adversely affect our business, financial condition and results of operations.

Environmental and Regulatory Compliance

We are subject to a variety of environmental laws, rules and regulations in each of the jurisdictions in which we conduct our business, with which we believe we comply. In certain cases, the cost of compliance with regulations can be substantial. Failure to comply with present or future regulations could result in legal claims, fines, operation suspensions or cessation of operations. Compliance often requires incurring costs and capital expenditures. We face few, if any, of these issues directly as we rely on third party manufacturers.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Government Contracts and Subsidies A significant portion of our revenues are derived from government and military agencies. Consequently, any disruption in government funding or in the relationship with those agencies could adversely affect our business.

Additionally, there are many government subsidies and economic incentives for solar energy related businesses. There is no guarantee that these incentives and subsidies will remain in place or that other countries, states, provinces or municipalities will adopt similar programs. The elimination of such subsidies and incentives, or the failure of additional countries, states, provinces or municipalities to adopt similar programs, may have an adverse impact on the solar market, and may result in rapid changes in demand and pricing. Such changes may have an adverse impact on our business and financial condition.

Product Quality and Reliability and Warranty Liability Risk Problems with product quality and/or performance, including defects in products could damage our reputation, or result in a decrease in customers and revenue, unexpected expenses and loss of market share. We cannot test for all defects, and occasionally defects may be detected after products have been shipped or installed. These defects could cause us to incur significant costs, including product replacement, and may adversely affect our customer relations and business reputation. Additionally, because we source many of our components from third party manufacturers, our ability to control product quality is limited.

We operate in a market where product reliability is essential as our products are often used as safety devices. A significant product failure could expose us to liability claims. While we maintain insurance to cover these risks, the adequacy of this coverage may be insufficient and litigation may extend beyond coverage held by the Company.

The grid-tie business, which was discontinued during the year had a strategy to focus on securing engineering, procurement and construction contracts. By their nature, these contracts include construction industry agreement terms including, amongst others, liquidated damages and indemnification obligations. We try to use our commercial best efforts to minimize our liability on such exposure. Although the business was divested during 2017, potential liabilities related to warranty may still arise.

If negative factors occur that are beyond our control or if disputes arise and are not settled favorably, they may have an adverse impact on our business, financial condition and results of operations.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Downturn in Economic and Market Conditions The lighting and signaling industries are susceptible to downturns related to declines in general economic conditions. Demand for solar lighting products and components are adversely impacted by the global financial crisis and corresponding decreases in or postponement of infrastructure spending budgets.

We may be adversely impacted by downturns in general economic and market conditions, both nationally and internationally. Economic downturns generally, or in our markets specifically, could have a material adverse effect on our, cash flows, financial condition and results of operations. Our future results of operations may experience substantial fluctuations from period to period because of these factors, and such conditions and other factors affecting capital spending may affect the timing of orders. As we sell to governments who continue to suffer from deficit spending and may need to cut spending further, we may experience a softening demand for our products.

Economic adversity coupled with a decline in our revenue could adversely affect our ability to meet capital requirements, support working capital requirements and growth objectives, or otherwise adversely affect our business, financial condition and results of operations.

Liquidity and Capital Requirements Although we have had some recent success in growing our sales in a profitable manner, we face a variety of challenges to maintain this in the coming periods. To do so, we must be prudent in adding operating costs and ensure we have sufficient liquidity as our working capital needs grow. There can be no assurance that we will be able to maintain adequate liquidity without additional capital.

Our future growth may also come from mergers and acquisitions, which may require us to raise additional capital. There is no guarantee we will be able to raise the necessary capital, and we may be forced to do so on terms that significantly dilute existing holders of Shares.

Litigation Risk We may in the future become involved in disputes, litigation or arbitration proceedings. The results of these proceedings cannot be predicted with certainty. If we are unable to resolve these disputes favorably, it may have an adverse impact on our business, financial condition and results of operations.

Cybersecurity Risk We rely on information technology systems and network infrastructure in all areas of operations and are therefore exposed to an increase number of sophisticated cybersecurity threats. A cybersecurity breach of sensitive and confidential information of the Company could disrupt systems and services and could the potential of compromising the Company's financial positions or brands, and/or otherwise adversely affect the ability to achieve our strategic goals.

We maintain policies, processes and procedures to address capabilities, performance security and availability including resiliency and disaster recovery for systems, infrastructure and data. We actively monitor, manage and continue to assess and enhance our ability to mitigate cybersecurity risks and protect confidential information within our organization.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Investment Risks Associated with the Use of Proceeds from the SPX Divestiture We are in the process of seeking suitable and appropriate investment opportunities for the use of proceeds derived from the SPX Divestiture as outlined in Section 6.11 of this MD&A; however, there is a risk that a suitable and appropriate investment opportunity will not be found within a reasonable time-frame. Even if such an investment opportunity exists there can be no assurances that any anticipated benefits from such an investment will be realized.

Acquisitions or other Business Transactions We may, when and if the opportunity arises, acquire other products, technologies or businesses with activities or product lines that are complementary to our business. Acquisitions involve numerous risks, including difficulties in the assimilation of the operations, technologies and products of the acquired companies the diversion of management's attention from other business concerns, risks associated with entering new markets or conducting operations in industry segments in which we have no or limited experience and the potential loss of key employees of the acquired company. There can be no assurances that any anticipated benefits of an acquisition will be realized. Future acquisitions could result in potentially dilutive issuances of equity securities, the use of cash, the incurrence of debt and contingent liabilities, and write-off of acquired R&D costs, all of which could materially adversely affect our financial condition, results of operations and cash flows.

Potential Reorganization of Operations or Product Offerings We routinely review our operations for additional efficiency opportunities or to reduce costs. That analysis may lead to the determination to close, eliminate, rationalize or reduce operations and divisions and/or alter the sales, manufacturing or distribution structure. Should we decide to pursue any such changes it may incur additional charges and losses which may be material. In addition, we could experience difficulties, disruptions or delays in the implementation of any such changes and there can be no assurance that we will be able to implement these programs successfully or on a timely basis.

Operational Risk While we have cash in hand following the SPX Divestiture, we do not have any significant cash flow from the remaining business operations. Accordingly, in order to maintain profitability in the future, we may be required to undergo a reorganization of our operations or restructuring of our businesses. Even if we undergo such a reorganization or restructuring, there can be no assurances that we will be profitable in the future.

Geopolitical and other Global or Local Events Geopolitical and other global or local events may have a significant effect on our operations as we operate in numerous foreign countries. Various events, including natural disasters, extreme weather conditions, labour disputes, civil unrest, war, political instability, terrorism, and contagious illness outbreaks, or the perceived threat of these events, may cause a disruption of our normal operations and may disrupt the domestic and international travel of our distributors and sales agents.

The U.S. administration has adopted changes to domestic and foreign policy and laws. At this time, we cannot predict the negative or positive impact, if any, that such policies and laws will have on our business. We will continue to monitor these developments in the U.S.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Legislative and Regulatory Change Risk

Our products have to comply with a broad range of legislation, regulation and government policies in jurisdictions where they are sold. Changes to existing legislation, regulation or government policies could negatively impact operations.

Political, legislative and regulatory changes in the U.S. may have an impact on duties charged for goods sold to the U.S. We will continue to monitor for such changes, and for any other developments in other jurisdictions, to determine the exposure on business.