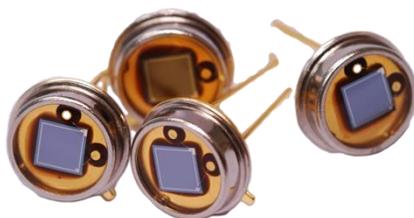


# ZECOTEK

## Zecotek Photonics Inc.



LFS Scintillation Crystals



MAPD Photo-Detectors



Detector and Scintillator Arrays for PET



Components for PET Medical Scanners & the Large Hadron Collider

### Management's Discussion & Analysis

For the quarter ended  
January 31, 2017

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## MANAGEMENT DISCUSSION AND ANALYSIS

**April 3, 2017**

This Management's Discussion and Analysis ("MD&A") of Zecotek Photonics Inc. (the "Company") is dated April 3, 2017. This MD&A should be read in conjunction with the Company's unaudited consolidated interim financial statements for the three months ended January 31, 2017 and should also be read in conjunction with the audited consolidated financial statements and MD&A for the year ended July 31, 2016. The unaudited interim consolidated financial statements are prepared in accordance with International Financial Reporting Standards. All dollar amounts are expressed in Canadian dollars except where noted. The parent company's accounts are maintained in Canadian dollars. The business activities of the Company, carried out through its subsidiaries in Singapore are conducted primarily in Singapore dollars. The rate of exchange on January 31, 2017 as reported by the Bank of Canada, for the conversion of one Singapore dollar into Canadian dollars was \$0.9242.

### Forward-Looking Statements

This discussion may contain forward-looking statements, including statements regarding the business and anticipated financial performance of the Company, which involve risks and uncertainties. These risks and uncertainties may cause the Company's actual results to differ materially from those contemplated by the forward-looking statements. Factors that might cause or contribute to such differences include, among others, Company's ability to successfully complete new product development along the timelines expected; the Company's need for funds to achieve its goals and uncertainties as to the availability and cost of funding; uncertainty as to the continued and future demand for the Company's products; the development of competing technologies and the possibility of increased competition; and other economic trends and conditions in the markets that the Company and its customers serve; and the effect of the risks associated with technical difficulties or delays in product introductions, improvements, implementation, product development, product pricing or other initiatives of the Company and its competitor. All other companies and products listed herein may be trademarks or registered trademarks of their respective holders.

### Company Overview

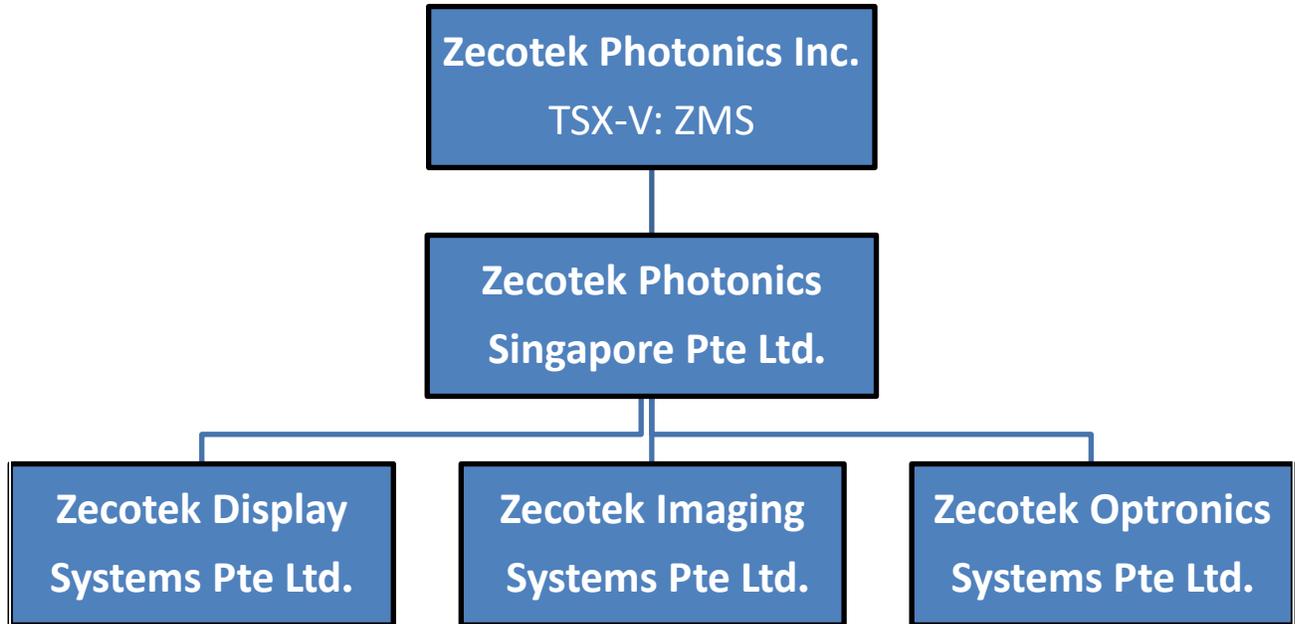
Zecotek Photonics Inc. develops leading-edge photonics technologies and products for commercial and research applications in many different markets: medical, bio-science, high-energy physics, pharmaceutical research, material processing, engineering and industrial design and multi-media.

Founded in 2004, the Company has focused on building shareholder value by securing a strong intellectual property portfolio, completing the development of unique technologies for targeted markets and pursuing the optimum commercialization strategy.

Zecotek Photonics Inc. has three operational subsidiary companies: Zecotek Imaging Systems Pte Ltd. (ZIS); Zecotek Display Systems Pte Ltd. (ZDS); and Zecotek Optronics Systems Pte Ltd. (ZOS). All of the subsidiary companies are incorporated in Singapore and owned by Zecotek Photonics Singapore Pte Ltd., a holding company. Each operational subsidiary is autonomous, in the sense that each has its own patent portfolio and management team.

Zecotek's corporate headquarters is located in Vancouver, B.C. It is a Canadian public company trading on the TSX Venture Exchange under the symbol "ZMS" and on the Frankfurt Stock Exchange under the trading symbol "W1F". The Company's website is [www.zecotek.com](http://www.zecotek.com).

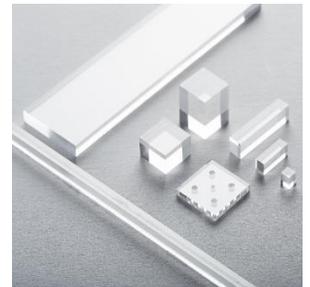
### *Company Structure*



### *Zecotek Imaging Systems Pte Ltd. (ZIS)*

ZIS is commercializing photonic technologies that offer both superior performance and economic advantages over competing technologies. The LFS crystal and the MAPD/T are central components for high-resolution PET medical scanners for diagnostics and treatment, and high energy physics experiments, such as the Large Hadron Collider at CERN, Switzerland and the Linear Accelerator at Fermi Lab, USA. ZIS is the only organization in the World that owns the three primary elements required for the manufacture of high resolution PET medical scanning devices: LFS crystal arrays, MAPD photo-detector arrays, and fast electronics. It has developed its own high performance integrated detector module (IDM) using its own high performance imaging components.

With the advancement of PET scanning diagnostics and its relevance to early treatment, PET technology has become indispensable to hospitals and clinics worldwide, especially in the fast growing BRIC economies of Brazil, Russia, India and China. New PET scanning technology requires denser, faster and brighter crystals, and OEMs are looking to Lutetium Oxide based scintillation crystals, compact solid-state photo detectors and faster electronic readout systems for the next generation of PET scanners. Time of Flight configurations allow for higher resolution and silicon based solid-state photo detectors present the possibility of integrating PET and MRI technologies into a single scanning device. Furthermore, major OEMs have recognized the advantages of using fully integrated detector modules



made of an array of crystals, an array of photo-detectors, readout electronics and a data acquisition board.

While the adoption of new technologies by OEMs does take time, revenues from the sale of crystals are growing as OEMs and scientific organizations have accepted and endorsed the advantages of Lutetium Oxide based scintillation crystals and other photonic technologies.

With Chinese patents in place and a manufacturing partner based in Beijing, ZIS identified China as an important PET market. In March 2016 a major medical OEM based in China selected LFS scintillation crystals for a new line of high resolution positron emission tomography (PET) medical imaging devices.

ZIS has also initiated the production and delivery of LFS crystal arrays specifically designed for mini-PET scanning devices, used for the development of pharmaceutical drugs. Small PET scanners work well with existing phototubes but require new, faster and brighter crystals such as the Zecotek's LFS crystals.



ZIS is working with the University of Washington in Seattle, on the integration of PET/MRI for imaging and pharmaceutical research. The focus of the partnership is the integration of a compact design for imaging of specific organs while offering an ideal diagnostic modality. One such device is a cost effective, high resolution neurological PET scanner "NeuroPET" for the detection and treatment of neurological disorders, specifically Alzheimer, Parkinson's and later age Dementia.

The scientific team at ZIS continues to work closely with CERN after the successful test of custom designed LFS-3 plates, due to the LFS-3 plate's density, stopping power, fast decay time, very good energy resolution, and radiation hardness. With a break-through plate design, experiments using LFS-3 plates can benefit from reduced labour and re-calibration costs associated with single crystal forms and reduced maintenance costs due to fewer interruptions associated with the maintenance and refitting of damaged crystals.

The scientific team continues to advance both crystals and photo detectors and has recently introduced LFS-8 and micro-pixel avalanche photo transistors, MAPT. The LFS-8 early samples have shown a higher performance than its sibling LFS-3, with the LFS-8 being two times faster. The MAPT technology has shown at least 10 times shorter photo-response duration with 10 times as high photo-response signal in comparison to known analogues.

### ***Zecotek Display Systems Pte Ltd. (ZDS)***

ZDS scientists have developed and demonstrated a colour, 32-inch 3D display prototype that offers multiple viewers with true volumetric visualization while exhibiting depth and parallax without the use of external glasses. ZDS's Real-Time 3D2D Display is a novel, patented display system for the visualization of images and data, which has been developed in-house by Zecotek's scientific team and technical staff and does not rely on any licensed intellectual property. All intellectual property is owned and controlled by Zecotek. The Zecotek 3D display technology has been granted US and Australian Patents under PCT.

Based on the auto stereoscopic principle, but with patent pending innovation, it represents a new generation of 3D displays. It has the capability of simultaneously presenting to multiple users both 3D and 2D images on the same screen with separate views and at different viewing angles. Its design provides for multi-users, multi-

views, freedom of movement, high resolution in both 3D and 2D modes, superior image dynamic range in 2D mode, 2D and 3D simultaneous displays, common brightness, compatibility with existing applications and cost competitiveness at all stages of adoption and levels of application.

The 3D display system provides for viewing a volumetric representation without eye strain. The viewing of such 3D images does not require the use of any supplementary means such as glasses, does not drastically limit the position of the viewer with respect to the display, and allows simultaneous viewing of the 3D display by many viewers from a relatively wide field of view.

The Company is involved in discussions with certain major electronics companies to co-develop an OLED/LED (organic light emitting diode) based, flat screen, glasses-free, true 3D HD television. Price point, concerns about visual health, and an overall lack of quality in the current 3D televisions requiring glasses, have all contributed to a declining consumer market. Zecotek's 3D display offers a realistic, HD, glasses free, multi-viewer 3D experience and now OLED/LED based flat screen display technologies are now meeting higher switching speeds necessary to support Zecotek's 3D display technology.

An advanced prototype of the 3D display has been shipped to a group in Russia for integration to a commercial product. A joint venture with the group is being structured, to concentrate on market demand from homeland security including airports, harbours, and government buildings. The program uses realistic 3D screening of hidden objects and precise identification of parts. A software combines all possible combinations of concealed parts to rule out potential weapons or triggers, and is being developed for speed of data and images reconstruction.

#### ***Zecotek Optronics Systems Pte Ltd. (ZOS) (formerly Zecotek Laser Systems Pte Ltd. (ZLS))***

ZLS has a joint laboratory with Inversion Fiber/Novolaser for the integration of tuneable fiber lasers in the visible spectrum. The tuneable visible fiber laser technology platform is now complete and lasers based on the platform have a large area of application in medicine, fundamental research, inspection and other industries. Zecotek is revising this division's technology portfolio and is re-structuring its business activities. Management is opting for ready technologies geared to cater for the ever expanding security market demands.

#### ***Zecotek Key Product Summary***

- Patented LFS family of advanced scintillation materials;
- Patent-pending MAPD solid-state high-sensitivity photo-detector (Micro-pixel Avalanche Photo Diode);
- Patented and patent-pending DOI-enabled scintillation detectors for PET imaging;
- Patented and patent-pending Mini PET/MRI technology;
- Patented and patent-pending 3D/2D auto-stereoscopic multiple-view display;
- Patented and patent-pending widely tunable fiber lasers in the visible spectrum.

#### **Patent Portfolio**

As a result of internal technology development, patent acquisitions and licensing partnerships, the Company's patent portfolio has continued to grow in numbers and technological diversity. As of July 31, 2016, Zecotek owned title to or controlled more than 50 patents and applications. The following table lists the key patents in Zecotek's patent portfolio.

| Key Technology                       | Patent/App. No     | Date Filed | Jurisdiction                            | Status          |
|--------------------------------------|--------------------|------------|---|-----------------|
| 3D displays                          | 7,944,465          | 27-02-06   | US, CA, AU                              | Granted         |
|                                      | 8,243,127          | 27-06-07   | US                                      | Granted         |
|                                      | PCT/IB2007/003309  | 07-11-07   | PCT, IN, JP                             | Pending         |
|                                      | 201070065          | 07-11-07   | EA (RU)                                 | Granted         |
|                                      | 10-2010-7001958    | 07-11-07   | KR                                      | Granted         |
|                                      | EP 2177041         | 07-11-07   | DE, GB, FR, NL                          | Granted         |
|                                      | 200780100317.0     | 07-11-07   | CN                                      | Granted         |
|                                      | 9,076,359          | 16-05-11   | US                                      | Publ. pending   |
|                                      | 9,055,288          | 11-07-12   | US                                      | Granted         |
|                                      | PCT/IB2013/000812  | 15-01-13   | PCT, US, JP, EP, CN, IN                 | Pending         |
|                                      | 14/167,512         | 29-01-14   | US                                      | Pending         |
|                                      | 14/167,544         | 29-01-14   | US                                      | Pending         |
| LFS scintillation crystals           | 7,132,060          | 21-07-05   | US                                      | Granted         |
|                                      | 2242545            | 04-11-03   | RU                                      | Granted         |
|                                      | PCT/RU2004/000094  | 12-03-04   | PCT, AU, CA, CN, EA, DE, FR, GB, JP, NL | Granted         |
|                                      | 1493/KOLNP/2006    | 12-03-04   | IN                                      | Pending         |
|                                      | PCT/CA2013/000349  | 26-04-13   | US, CA, AU, CN, KR, EP, EA, IN, JP      | Pending         |
|                                      | 14/051,328         | 10-10-13   | US                                      | Pending         |
|                                      | 14/272,405         | 07-05-14   | US                                      | Pending         |
| 14/295,301                           | 02-10-14           | US         | Pending                                 |                 |
| Semiconductor photo-detectors (MAPD) | 2316848            | 01-06-06   | RU                                      | Granted         |
|                                      | PCT/RU2007/000287  | 31-05-07   | PCT, AU, CA, EP, IN, MY                 | Pending         |
|                                      | 148413             | 31-05-07   | SG                                      | Granted         |
|                                      | 200780024920.5     | 31-05-07   | CN                                      | Granted         |
|                                      | 8,742,543          | 20-02-08   | US                                      | Granted         |
|                                      | 5320610            | 31-05-07   | JP                                      | Granted         |
|                                      | 5666636            | 31-05-07   | JP                                      | Granted         |
|                                      | 10-2008-7032265    | 31-05-07   | KR                                      | Granted         |
|                                      | 13/609,136         | 10-09-12   | US                                      | Pending         |
|                                      | 14/292,221         | 30-05-14   | US                                      | N. of Allowance |
| 14/459,136                           | 19-02-15           | US         | Pending                                 |                 |
| PET imaging technologies             | 7,956,331          | 27-10-08   | US                                      | Granted         |
|                                      | 8,003,948 B2*      | 03-11-08   | US                                      | Granted         |
|                                      | PCT/US2008/082273* | 03-11-08   | PCT, AU, CA, EP, JP, KR, CN             | Pending         |
|                                      | 13/125,966*        | 22-10-09   | US                                      | N. of Allowance |
|                                      | 8,431,904*         | 26-10-09   | US                                      | Granted         |
|                                      | 8,309,932*         | 18-08-11   | US                                      | Granted         |
|                                      | 14/195,735         | 14-09-11   | US                                      | N. of Allowance |
|                                      | 13/609,136         | 10-09-12   | US                                      | Pending         |
|                                      | 2013-528480        | 14-03-13   | JP                                      | Pending         |
| Visible fibre lasers                 | 12/182,951         | 30-07-08   | PCT, US                                 | Pending         |
|                                      | 2006119198         | 02-06-06   | RU                                      | Granted         |

\* Zecotek, as principal financier and development partner of imaging components with the University of Washington, has the exclusive license rights for improved data-processing electronics for new generation PET scanning devices.

Zecotek's research and development success depends on having a quality portfolio of patents, which are not only technically valuable, but are properly filed and maintained in appropriate jurisdictions. The Company

devotes a significant effort to the administration of its portfolio, ensuring that any applications are duly filed in appropriate jurisdictions. It maintains carefully balanced mix of internal and external patent administration.

## **Corporate Strategy**

Since Zecotek's formation in 2004, it has developed and acquired a significant technology based intellectual property portfolio protected by patents issued or filed worldwide. Furthermore, the Company has integrated a number of technologies into value-added components and products which it has manufactured in limited production runs.

Zecotek's core business strategy is to commercialize photonic products and technologies through strategic alliances with major corporations. The central objective is to enter growth markets with products featuring competitive costs and performance superiority – leading to above average profits and shareholder returns.

Zecotek brings leading-edge photonics technologies to alliances while corporate partners bring their existing product development, marketing, manufacturing and distribution resources. The product delivery vehicle will be generally a joint venture, structured to clearly identify each partner's contributions, efficiently manage project costs, preserve each partner's IP rights, enable investment by fourth parties and minimize time to market.

## **Recent Business Activities**

### ***Shanghai EBO Crystal Assembly Company***

On March 9, 2017, the Shanghai EBO Crystals Assembly Company was appointed exclusive distributor of its patented LFS scintillation crystals for all sales in China, and EBO agreed to use only LFS scintillation crystals in arrays for all new PET medical scanners. No competing crystals will be used.

On January 25, 2017, Zecotek announced a LFS scintillation crystal supply agreement with the Shanghai based company EBO Optoelectronics. The agreement is to supply over \$21 million worth of scintillation crystals over the next three years. The agreement stipulates that the supply of the LFS crystals will continue a yearly basis after the initial three-year period, unless otherwise agreed to by both parties. Zecotek will become the main supplier of Lutetium silicate based scintillation crystals to EBO.

The Shanghai EBO Crystals Assembly Company is the largest crystal array producer and supplier in China

### ***Chinese PET Manufacturer MOU***

On March 21, 2017, Zecotek announced an update to the memorandum of understanding (MOU) with the Chinese medical OEM. Due to the changing medical scanner landscape in China, the proposed agreement now calls for the Chinese OEM to purchase LFS crystal based arrays through the Shanghai EBO Opto-electronics Company (EBO).

In March 2016 Zecotek signed a memorandum of understanding (MOU) with a major medical OEM based in China. The MOU contemplates the installation of up to 200 LFS based PET scanners in hospitals and clinics across China over the next five years. For competitive reasons the OEM has requested to remain anonymous until the contract is in effect.

On May 6, 2016, Zecotek delivered the first order of LFS crystals to the Chinese PET manufacturer meeting the first condition of the MOU.

On July 28, 2016, the Chinese PET manufacturer completed the assembly of the first PET medical scanner for testing and ordered Zecotek's patented LFS crystals for a second unit.

On October 13, 2016, the Chinese OEM ordered LFS scintillation crystals for a third positron emission tomography (PET) scanning device.

On October 20, 2016, Zecotek announced that it has signed a cooperation agreement with the Shanghai Creation Investment Management Company (SCI) to initiate a US\$5 million financing into its wholly owned subsidiary, Zecotek Imaging Systems Pte Ltd. The agreement calls for a maximum equity position of 10% of Zecotek Imaging stake, with the final valuation contingent upon the execution of the previously announced MOU, with a Chinese PET manufacturer. The investment in Zecotek Imaging Systems will be used to build out the necessary organizational and operational infrastructure and add China based management to deliver its patented imaging technologies to the Chinese medical PET industry.

### *Sales/Partnerships*

On December 14, 2016, Zecotek announced that a major European automobile manufacturer had approached management to initiate discussions around developing a 3D head-up display (HUD) and entertainment console for a line of luxury automobiles. Zecotek's patented 3D auto stereoscopic display technology is superior to existing HUD systems because it does not require eye tracking and it provides a deeper field of view for both the driver and the passenger, as they are able to see pictures with the same relative primary resolution.

On September 20, 2016, Zecotek announced that its wholly owned subsidiary Zecotek Imaging Systems signed an exclusive sales and distribution agreement with RAM N.S. Technologies (RAM-Tech) for Zecotek's imaging products in Israel.

On August 15, 2016, Zecotek announced that a world leader in the area of level, switching and pressure measurement for the process industry, ordered LFS scintillation crystals for a leading edge approach to the measurement of silos and large containers. The device is able to detect the level of liquids, pastes, powders and bulk solids in silos and large containers and is to be widely deployed in industries such as oil and gas, chemical, and waste management.

On July 12, 2016, Zecotek announced the University of California at Davis ordered additional patented LFS scintillation crystals for a leading edge approach to positron emission tomography (PET) scanning which combines PET and magnetic resonance (MR) into a single PET/MR module.

In June, 2016, Zecotek announced it received a second order for its patented Lutetium Fine Silicate (LFS) scintillation crystals from the same major OEM developing radiation monitoring and detection devices. This follows the initial order for LFS crystals previously announced on April 1, 2016 whereby the LFS crystals were tested in a device for large cargo screening at land crossings such as border crossings, airports, and ports. The second order of LFS crystals are to be tested for screening applications for luggage, bags, packages, for high security locations including government buildings, sports stadiums, conventions centers and other crowded venues.

In April 2016 Zecotek announced that it had entered the homeland security and border protection and safety market by delivering preliminary orders of LFS scintillation crystals to major OEMs developing radiation monitoring and detection devices. LFS crystals are ideal at detecting small amounts of radiation due to their unique combination of high energy resolution, low background noise, high light yield and short decay time. The LFS crystals will be tested in devices used in homeland security and border protection and safety, specifically border security, land crossings, airports, harbours and strategic government buildings.

In December 2015 Zecotek received an order for LFS scintillation crystals from a specialized medical imaging device manufacturer based in the United States. The U.S. based company has developed a state-of-the-art molecular brain imaging device for diagnosis of Alzheimer's disease, Frontotemporal Dementia, Lewy Body Dementia, Parkinson's disease, and other neurological and psychiatric disorders. The U.S. based company has selected the LFS crystal for its commercial medical scanning program. The initial LFS crystal order will meet the need for a single, specialized positron emission tomography (PET) medical imaging scanner, however the neuroimaging market currently under served, the U.S. based medical imaging device manufacturer expects to deliver more than 1,000 devices over the next five years.

In November 2015 Zecotek received a \$250,000 order for LFS scintillation crystals from a strategic partner. The LFS crystals will be used for installation in the first positron emission tomography (PET) medical imaging scanner in a series of newly designed devices.

In October 2015 Zecotek received a \$500,000 order for LFS scintillation crystals from a positron emission tomography (PET) medical imaging device manufacturer based in China. The Chinese OEM has chosen Zecotek's LFS scintillation crystals for a new series of PET medical imaging devices and this is the first of a contemplated series of purchase orders to meet the OEM's customers request for high resolution PET scanners.

In September 2015 the University of California at Davis successfully tested LFS scintillation crystals in a new cutting edge approach for positron emission tomography (PET) scanning.

In August 2015 Zecotek Display Systems Pte Ltd., signed agreements with the Engineering Centre of the National Research Nuclear Center MEPhi (ECM) and its business affiliate Novilab Mobile LLC., to commercialize Zecotek's patented 3D auto-stereoscopic display monitors in Russia and countries of the Commonwealth of Independent States (CIS). The agreements offer ECM and Novilab exclusive rights to the Russian 3D display market. In return ECM and Novilab will be responsible to fund the manufacturing technology transfer of the existing 3D display technology to a final product, and to commercialize the final product for specialized high-end markets in Russia.

### ***Patents***

In April, 2016 Zecotek announced that its wholly owned division, Zecotek Imaging Systems Pte. Ltd., was granted its first patent in a series of pending patents for its advanced formulation of its patented LFS scintillation crystals. The Australian patent is for multi-doped lutetium oxide based scintillators having improved photonic properties.

In January 2016 the Company announced that the U.S. Patent office issued a Notice of Allowance for an enhanced LFS crystal array manufacturing process which allows for more flexible production output at a

significantly improved price point. The enhanced process produces LFS crystal arrays of various sizes and configurations at a competitive price when compared to other crystal arrays and single elements.

In November 2015 the U.S. Patent office granted to Zecotek U.S. Patent No. 9,182,605 and U.S. Patent No. 9,182,606 for technology related to the Company's front and rear projection autostereoscopic 3D display systems respectively.

In October 2015 the U.S. Patent office issued a Notice of Allowance for a novel micro-pixel avalanche photo transistor (MAPT). Zecotek's scientific team has refined the design of its solid-state micro-pixel avalanche photo diode (MAPD) into a silicon photomultiplier transistor tailored specifically for positron emission tomography (PET) medical imaging and other major sensor industries.

In July 2015 the Japanese Patent Office issued a patent for technology related to the Company's switchable 3D/2D optical imaging system.

In June 2015 the U.S. Patent office granted U.S. Patent No. 9,055,288 to Zecotek for technology related to the Company's switchable 3D/2D optical imaging system. The 3D/2D switchable optical imaging system further improves the core capabilities of the 3D display technology by introducing a software-selectable full-resolution 2D mode with viewing angles and dynamic range/colour depth on par with conventional 2D displays. The patent also covers technology for both 3D and 2D modes, dynamic adjustment of viewing angle, number and width of viewing zones as well as the functionality to dynamically control the positioning of different viewing zones.

### ***Hamamatsu Photonics***

Hamamatsu has purchased over \$3 million of LFS scintillation crystal purchase orders for use in PET medical devices. On a monthly basis Zecotek delivers LFS crystals to Hamamatsu for integration in IDM modules for PET medical scanners. While the PET OEMs have committed to take delivery of the crystals, not all have finalized the configuration specifications for the detector modules and therefore a quantity of crystals are awaiting shipment schedules. The crystals boules have been grown and await instructions on how the individual pieces will be specifically cut.

Zecotek continues to ship LFS crystals to Hamamatsu for integration in IDM modules for PET medical scanners.

### ***The European Organization for Nuclear Research (CERN)***

CERN is one of the world's largest and most respected centres for scientific research and has become a very important partner of Zecotek. In 2013 CERN scientists confirmed the discovery of the Higgs Boson, a new subatomic particle. As CERN pushes into this new frontier of science, new experiments are required to determine the particle's properties and its true form. High energy scintillation crystals with high radiation hardness are paramount for the success of the next stage of experiments and Zecotek's imaging technologies are playing an increasingly important role.

On April 21, 2016 Zecotek announced that the Positron Emission Tomography (PET) program at European Organization for Nuclear Physics (CERN) has selected and ordered its patented LFS scintillation crystals for its work on PET medical scanning devices. After a long process of testing, Zecotek's LFS scintillation crystals were chosen because they provide the best results for coincidence timing resolution. The LFS technology and

formulation also present an intrinsic capability and ability for the future development of even higher performance LFS versions as compared to any competing crystals.

In June 2015 Zecotek reported that its LFS scintillation crystals achieved a more precise coincident time resolution (CTR) when compared to competing crystals in tests conducted by a CERN PET research group, on crystals with dimensions used in commercial PET medical scanners. Coincidence timing resolution is important in time-of-flight PET medical scanners, because it improves the image signal to noise ratio and allow for shorter scanning times. The results were presented at a recent 2015 IEEE Nuclear Science Conference in Seattle and have been published in major journals.

In December 2014, the scientific team at CERN ordered additional LFS-3 plates to be integrated into modules for the main Compact Muon Solenoid (CMS) experiment. The order followed the successful test of the newly configured LFS scintillation crystals (LFS-3 plates) using the Large Hadron Collider's high energy beam upgrade.

In September 2014, CERN scientists in the Large Hadron Collider requested new configuration of LFS scintillation crystals (LFS-3 plates). Due to the high quality performance of the individual plates, the scientific team at CERN has ordered enough LFS-3 plates to build initial modules which will be installed in the Large Hadron Collider and subjected to a high energy beam.

There are six CERN experiments using Zecotek's solid-state MAPD photo detectors:

- The Alice Experiment,
- The NA612 Experiment,
- The Swiss Federal Institute of Technology,
- The Joint Institute for Nuclear Research,
- The Compact Muon Solenoid Experiment,
- The Compass Experiment.

Zecotek and Hamamatsu are also working closely with CERN on the adoption of the LFS crystal as a strong candidate to replace the old material. The LFS's high radiation hardness is a prime and essential feature in the design considerations for the next high energy levels required in the Large Hadron Collider experiments.

### ***3D Printing***

During the quarter ended January 31, 2015 Zecotek and its partner LT-PYRKAL of Yerevan, Armenia, completed the first phase of the 3D printing project, including analysis of competing technologies and study of metal compounds compatible with additive laser manufacturing. During this phase of the project, several such compounds were synthesised and studied in order to determine their potential as construction-strength material for laser 3D printing. Upgrades to the lab equipment were carried out necessary for further activities within this project. Zecotek has since put the 3D printing program on hold due to an internal business and corporate restructuring of LT-PYRKAL. The project will resume in 2017.

### ***Research & Development & Other Activities***

On March 14, 2017, Zecotek increased the previously announced financing for an equity stake in Zecotek Imaging Systems to \$15 million. The Company also announced a concurrent 10 million financing for an equity stake in its wholly owned subsidiary Zecotek Display Systems. The increase in the Imaging Systems financing is due to an improved valuation of the wholly owned subsidiary and the growing demand for

Zecotek's patented LFS scintillation crystals by the Chinese PET OEM industry. The Display Systems financing is to raise the necessary funds to complete the integration of its patented 3D display monitor for automotive applications. Both divisional financings will be conducted on a best efforts basis.

Zecotek's LFS crystal enhancement program has shown substantial improvement resulting in a new version of the crystal: LFS-8. The LFS-8 is two times faster than the current LFS-3. OEMs using Zecotek's LFS-3 will be given priority to progress to LFS-8 for higher image resolution.

A newly designed MAPT was introduced as a leading photo sensor contender in areas of time-of-flight optical photo detection. The MAPT technology allows at least 10 times shorter photo-response duration with 10 times as high photo-response signal in comparison to known analogues.

A breakthrough manufacturing process was announced that uses robotics for assembling LFS crystal arrays. The new process results in faster production of the crystal arrays with exceptional accuracy and uniformity.

### *Financings*

On March 17, 2017, the Company completed the third tranche of share subscription agreements for the financing announced on November 7, 2016. Under the agreements, the subscribers purchased 1,255,000 units of the Company at a price of \$0.30 per unit, for gross proceeds of \$376,500. Each unit consists of one common share and one share purchase warrant. Each whole warrant entitles the holder to acquire one common share at an exercise price of \$0.43 per share for a period of 24 months after the date of the private placement. Pursuant to the closing of the financing, the Company paid finder's fees and agents commission of \$14,070 and issued 46,900 non-transferable finder's warrants. Each finder's warrant is exercisable into units at \$0.30 per unit for a 24 month period. Each unit consists of one common share and one half of a share purchase warrant. Each whole warrant is exercisable into one common share at \$0.43 per share before March 17, 2019. All shares and warrants are subject to a four-month hold period expiring on July 18, 2017.

On November 25, 2016, the Company completed the second tranche of share subscription agreements for the financing announced on November 7, 2016. Under the agreements, the subscribers purchased 3,620,000 units of the Company at a price of \$0.30 per unit, for gross proceeds of \$1,086,000. Each unit consists of one common share and one share purchase warrant. Each whole warrant entitles the holder to acquire one common share at an exercise price of \$0.43 per share for a period of 24 months after the date of the private placement. Pursuant to the closing of the financing, the Company paid finder's fees and agents commission of \$69,020 and issued 230,067 non-transferable finder's warrants. Each finder's warrant is exercisable into units at \$0.30 per unit for a 24 month period. Each unit consists of one common share and one half of a share purchase warrant. Each whole warrant is exercisable into one common share at \$0.43 per share before November 25, 2018. All shares and warrants are subject to a four-month hold period.

On November 18, 2016, the Company completed the first tranche of share subscription agreements for the financing announced on November 7, 2016. Under the agreements, the subscribers purchased 1,000,000 units of the Company at a price of \$0.30 per unit, for gross proceeds of \$300,000. Each unit consists of one common share and one share purchase warrant. Each whole warrant entitles the holder to acquire one common share at an exercise price of \$0.43 per share for a period of 24 months after the date of the private placement. Pursuant to the closing of the financing, the Company paid finder's fees and agents commission of \$21,000 and issued 70,000 non-transferable finder's warrants. Each finder's warrant is exercisable into units at \$0.30 per unit for a 24 month period. Each unit consists of one common share and one half of a share purchase warrant.

Each whole warrant is exercisable into one common share at \$0.43 per share for a 24 month period. All shares and warrants are subject to a four-month hold period.

On August 26, 2016, the Company completed the share subscription agreements for the financing announced on August 12, 2016. Under the agreements, the subscribers purchased 2,761,935 units of the Company at a price of \$0.30 per unit, for gross proceeds of \$828,581. Each unit consists of one common share and one share purchase warrant. Each whole warrant entitles the holder to acquire one common share at an exercise price of \$0.43 per share for a period of 24 months after the date of the private placement. Pursuant to the closing of the financing, the Company paid finder's fees and agents commission of \$57,161 and issued non-transferable finder's warrants to purchase 190,535 Common Shares at \$0.30 per share before August 29, 2018. All shares and warrants are subject to a four-month hold period expiring on December 30, 2016.

On June 20, 2016, the Company completed the share subscription agreements for the financing increased on May 26, 2016. Under the agreements, the subscribers purchased 2,989,333 units of the Company at a price of \$0.30 per unit, for gross proceeds of \$896,800. Each unit consists of one common share and one share purchase warrant. Each warrant entitles the holder to acquire one common share at an exercise price of \$0.43 per common until June 20, 2018. Pursuant the closing of the financing, the Company paid finder's fees consisting of cash totaling \$60,676 and issued 202,253 finder's warrants. Each finder's warrant entitles the holder to acquire one unit (the "Unit") at a price of \$0.30 per unit. Each unit consists of one common share in the capital of the Company and one half of a share purchase warrant (the "Unit Warrant"). Each whole unit warrant shall entitle the holder to acquire one common share at a price of \$0.43 per common share until June 20, 2018. All securities issued are subject to a four-month hold period expiring on October 20, 2016.

On May 26, 2016, the Company completed the share subscription agreements for the financing announced on May 9, 2016. Under the agreements, the subscribers purchased 2,259,997 units of the Company at a price of \$0.30 per unit, for gross proceeds of \$678,000. Each unit consists of one common share and one share purchase warrant. Each warrant entitles the holder to acquire one common share at an exercise price of \$0.43 per common until May 26, 2018. Pursuant the closing of the financing, the Company paid finder's fees consisting of cash totaling \$47,460 and issued 158,200 finder's warrants. Each finder's warrant entitles the holder to acquire one unit (the "Unit") at a price of \$0.30 per unit. Each unit consists of one common share in the capital of the Company and one half of a share purchase warrant (the "Unit Warrant"). Each whole unit warrant shall entitle the holder to acquire one common share at a price of Cdn\$0.43 per common share until May 26, 2018. All securities issued are subject to a four-month hold period expiring on September 27, 2016.

On February 2, 2016, the Company completed the share subscription agreements for the financing announced on October 30, 2015. Under the agreements, the subscribers purchased 1,301,889 units of the Company at a price of \$0.36 per unit, for gross proceeds of \$468,680. Each unit consists of one common share and one share purchase warrant. Each warrant entitles the holder to acquire one common share at an exercise price of \$0.53 per common until February 4, 2018. Pursuant the closing of the financing, the Company paid finder's fees consisting of cash totaling \$17,180 and issued 47,724 finder's warrants. Each finder's warrant entitles the holder to acquire one common share at an exercise price of \$0.53 per common share until February 4, 2018. All securities issued are subject to a four-month hold period expiring on June 5, 2016.

On December 15, 2015, the Company completed the share subscription agreements for the financing announced on December 9, 2015. Under the agreements, the subscribers purchased 3,084,000 units of the Company at a price of \$0.36 per unit, for gross proceeds of \$1,110,240. Each unit consists of one common

share and one share purchase warrant. Each warrant entitles the holder to acquire one common share at an exercise price of \$0.53 per common share until December 15, 2017.

On November 5, 2015, the Company completed the share subscription agreements for the financing announced on October 30, 2015. Under the agreements, the subscribers purchased 2,432,673 units of the Company at a price of \$0.36 per unit, for gross proceeds of \$875,762. Each unit consists of one common share and one share purchase warrant. Each warrant entitles the holder to acquire one common share at an exercise price of \$0.53 per common until November 5, 2017.

On August 31, 2015, the Company amended the terms of 2,983,469 warrants issued to subscribers of a private placement which closed on September 4, 2013. The Company re-priced the exercise price of the subscriber warrants to \$0.55 per common share from the initial exercise price of \$0.75, and extended the expiry date to March 5, 2015. The exercise period automatically accelerates to 30 days if the closing price for the common shares of the Company is \$0.69 or greater for a period of 10 consecutive trading days

## Selected Annual Information

|                             | <b>Audited<br/>Year Ended<br/>July 31, 2016</b> | <b>Audited<br/>Year Ended<br/>July 31, 2015</b> | <b>Audited<br/>Year Ended<br/>July 31, 2014</b> |
|-----------------------------|---|---|---|
| Revenue                     | \$ 1,487,516                                    | \$ 451,747                                      | \$ 86,535                                       |
| Net loss for the year       | \$ (5,242,204)                                  | \$ (7,165,016)                                  | \$ (8,453,111)                                  |
| Net loss per share          | \$ (0.04)                                       | \$ (0.07)                                       | \$ (0.09)                                       |
| Total assets                | \$ 803,552                                      | \$ 1,290,288                                    | \$ 1,185,706                                    |
| Total long-term liabilities | Nil   | Nil   | Nil   |
| Cash dividends declared     | Nil   | Nil   | Nil   |

## Results of Operations

### *Net Loss*

The Company recorded a net loss of \$1,333,509 or \$0.01 per share in the second quarter of fiscal 2017, compared with \$1,873,365 or \$0.02 per share in the same period of 2016, a decrease of 25%. A net loss of \$2,507,244 or \$0.02 per share was recorded during the first six months of fiscal year 2017 compared to \$3,042,217 or \$0.03 per share in the same period of 2016 resulting in decrease of 15%. The operational losses resulted from general and administrative costs such as salaries, consulting fees, travel, rents, various overheads, marketing, engineering development and manufacturing contracts with BOET (Beijing Opto-Electronics Technology Co., Ltd., China, for the production of the Lutetium Fine Silicate (LFS) scintillation crystals.

## ***Revenue***

The Company recorded \$6,029 revenue in the second quarter of 2017 compared to \$697,365 in the same period in 2016, a decrease of 99%. For the first six months of fiscal year 2017, revenues decreased by 75% to \$213,675 from \$846,954 in the same period of 2016. Revenues are from the sales of LFS scintillation crystals (imaging division) to PET OEMs and scientific organizations that are testing and using our products. Due to specific customer requirements the timing of sales and revenues can fluctuate significantly. The Company has firm commitments for future delivery of crystals.

As at January 31, 2017, US\$1.58 million of the US \$2.5 Million order for LFS scintillation crystals had not yet been fulfilled. Hamamatsu made the original order after reaching out to major end users of scintillation crystals, with whom it has had long term supply relationships for its detectors and other imaging components. The main users of scintillation crystals are PET scanning device original equipment manufacturers (OEM), and high energy physics centers such as CERN. Due to engineering design upgrades and internal integration processes at the OEMs the orders for the scintillation crystals have been delayed. Zecotek and Hamamatsu are working closely with the OEMs, and their scientific teams to expedite the integration process. Zecotek has started delivering preliminary amounts of scintillation crystals to Hamamatsu which are being used in various end user's new designs.

## ***Operating, General and Administrative Expenses***

Operating, General and administrative ("G&A") expenses amounted to \$1,023,001 in the second quarter of 2017, compared with \$1,483,821 in the same period of 2016, representing a decrease in costs of 31%. For the first six months of fiscal year 2017, the G&A expenses amounted to \$1,885,192 as compared to \$2,351,438 for the same period in 2016, representing a decrease of 20%.

Increases or decreases in specific categories for the first quarter of 2017 are:

1. Consulting and other professional fees; amounted to \$546,846 in the second quarter of 2017, compared with \$885,478 in the same period of 2016, representing a decrease of 38%. For the first six months of fiscal year 2016, the expenses decreased 31% from \$1,250,477 to \$861,153 primarily due to the decrease in the legal expense and management consultancy fees.
2. Salaries and benefits; amounted to \$230,247 in the second quarter of 2017, compared with \$269,128 in the second quarter of 2016, representing a decrease of 14%. For the first six months of fiscal year 2017, expenses decreased 13% from \$546,347 to \$473,376 due to decrease in benefits paid to the CEO.
3. Travel; amounted to \$62,228 in the second quarter of 2017, compared with \$73,920 in the same period of 2016, representing a decrease of 16%. For the first six months of fiscal year 2017, travel decreased 28% from \$139,355 to \$100,783 due to less traveling during the period.
4. Rent – amounted to \$32,142 in the second quarter of 2017, compared with \$66,681 in the second quarter of 2016, representing a decrease of 52%. For the first six months of fiscal year 2017, expenses decreased 44% from \$115,066 to \$64,915 due to consolidating the two offices in Vancouver.

## ***Research and Development Expenses***

Research and development ("R&D") expenses amounted to \$313,318 in the second quarter of 2016, compared with \$492,998 in the second quarter of 2017 representing a decrease in costs by 31%. For the first six months of fiscal year 2017, the R&D expenses decreased 23% from \$849,304 to \$655,019 in the same period of 2016. The focus of the research and development projects that are still being currently carried out are to meet the

specifications required by the OEM and adapting and improving our technologies for different applications demanded by the market.

### ***Amortization of property and equipment***

Amortization expense for the second quarter of 2017 decreased to \$4,560 from \$6,115 in the same period of 2016, a decrease of 25%. For the first six months of fiscal year 2017, the amortization expense amounted to \$9,244; as compared to \$12,052 in the same period of 2016 reflecting a decrease of 23%. The variances are due to the accelerated depreciation methods used by the Company and change in foreign exchange rates.

### ***Amortization of patent costs***

Amortization expense for the second quarter of 2017 decreased to \$6,901 from \$7,146 in the same period of 2016 representing a decrease of 3%. For the first six months of fiscal year 2017, the amortization expense amounted to \$13,997 as compared to \$14,060 in the same period of 2016. There is not much change in the amortization of patent costs as all the current patent costs incurred are being expensed.

### ***Trade and other payables***

Trade and other payables consists of trade payables and accrued liabilities, wages payable, compensation waivers and government grants.

|  | January 31,<br>2017 | January 31,<br>2016 |
|--|---------------------|---------------------|
| Trade payables and accrued liabilities | \$ 2,993,502        | \$ 2,730,581        |
| Wages payable                          | 782,989             | 756,372             |
| Compensation waivers                   | 976,777             | 985,743             |
| Government grants                      | -                   | 1,497,407           |
| <b>Total</b>                           | <b>\$ 4,573,268</b> | <b>\$ 5,970,103</b> |

### ***Compensation waivers***

In March of 2011, the Company entered into agreements with certain of its consultants, directors and employees (the "individuals"). Under these agreements, the individuals waived salaries and fees owed to them totaling \$976,777 in favor of bonus payments of the same amounts, which are to be paid upon certain triggering events, including a sale of substantially all of the assets of the Company, or the shares of the Company, commercialization of any of the technologies of the Company, a public listing of shares of a subsidiary of the Company, or cash inflows exceeding \$3,000,000 in any three-month period.

### ***Government grants***

The Company has received grants from the Government of Singapore - Economic Development Board ("EDB") and the Government of Malaysia - Industrial Development Authority ("MIDA"). During the 2009 year, the Company received Singapore dollars \$1,554,778 (Canadian dollars \$1,449,986 at the current rate) and recorded this as a reduction in expenditures and expenses as management believed there was reasonable assurance that the amounts would not have to be repaid. The EDB grant is contingently repayable should the Company not meet certain requirements in respect to local employment, expenditures and production. As at July 31, 2010, it was determined that certain of these conditions were not met in respect to the EDB grant.

The Company received correspondence from the EDB in August 2010 in which the EDB required repayment of cumulative grants received by the Company in the amount of Singapore dollars \$1,554,778 (Canadian

dollars \$1,436,926), referring to the Company not meeting all original conditions of the grant. The amount was recognized as a liability, under accounts payable, as at January 31 and July 31, 2016. The Company disputed the repayment requirement.

In May 2012, EDB requested the Company to provide a fresh update on all the grant conditions to better evaluate the Company's appeal for changes to the grant conditions in order to reduce the repayment to EDB. EDB has completed reviewing the information provided by the Company and has agreed to waive the recovery of the grants. As at January 31, 2017 \$nil (2016: \$1,537,209) was included in trade and other payables in relation to this grant.

***Related party transactions:***

The Company undertook the following transactions with related parties. These transactions were measured at the exchange amounts which are the amounts of consideration established and agreed upon by the related parties.

The Company undertook the following transactions with related parties. These transactions were measured at the exchange amounts which are the amounts of consideration established and agreed upon by the related parties.

- (a) The Company incurred \$17,844 (2016 - \$28,211) in legal fees to Boughton Law Corporation, legal counsel to the Company, for legal services rendered during the quarter. A director of the Company is an Associate Counsel of Boughton Law Corporation. At January 31, 2017, \$59,778 (2016 - \$42,551) was outstanding and included in trade and other payables.
- (b) The Company incurred fees of \$45,000 (2016 - \$49,016) during the quarter for consulting services provided by the chief financial officer. At January 31, 2017, \$35,608 (2016 - \$17,156) of the fees was unpaid and included in trade and other payables.
- (c) During the quarter, the Company incurred salaries of \$51,887 (2016 - \$53,740) for the Executive Vice President, Operations. At January 31, 2017, \$113,089 (2016 - \$nil) of the salaries was unpaid and included in trade and other payables. The loan payable to the Executive Vice President, Operations amounted to \$45,548 as at January 31, 2017 (2016 - \$nil).
- (d) During the quarter, the Company incurred salaries and benefits of \$51,015 (2016 - \$80,231) for the President and Chief Executive Officer ("CEO") and fees of \$119,035 (2016 - \$123,287) for consulting services to a company controlled by the President and CEO. At January 31, 2017, \$83,244 (2016- \$nil) of the salaries and benefits; and \$367,524 (2016 - \$79,526) of the fees were unpaid and included in trade and other payables.
- (e) The Company incurred fees of of \$19,500 (2016 - \$19,500) during the quarter for directors' services. At January 31, 2017, \$189,000 (2016 - \$130,500) was unpaid and included in trade and other payables.
- (f) The Company incurred fees of \$30,000 (2016 - \$30,000) during the quarter for accounting and related services provided by the Corporate Secretary. At January 31, 2017, \$10,500 (2016 - \$nil) was unpaid and included in trade and other payables.

## Summary of Quarterly Results

The following table is a summary of the unaudited consolidated operating results of the Company presented in accordance with IFRS for the last eight quarters. Certain of the comparative figures in the following table have been reclassified to conform to the presentation adopted for 2016.

The significant decrease in sales during the quarter ended January 31, 2017 as compared to the quarter ended October 31, 2016 is mainly due to delay in production.

| Quarters ended<br>(unaudited) | January 31<br>2016 | October 31<br>2016 | July 31<br>2016 | April 30<br>2016 |
|-------------------------------|--------------------|--------------------|-----------------|------------------|
| Revenue                       | \$6,029            | \$207,646          | \$362,674       | \$277,888        |
| Net loss                      | \$1,333,509        | \$1,173,735        | \$1,362,446     | \$837,541        |
| Loss per share                | \$0.01             | \$0.01             | \$0.01          | \$0.01           |
| Quarters ended<br>(unaudited) | January 31<br>2016 | October 31<br>2015 | July 31<br>2015 | April 30<br>2015 |
| Revenue                       | \$697,365          | \$149,589          | \$208,067       | \$70,149         |
| Net loss                      | \$1,873,365        | \$1,168,852        | \$1,375,697     | \$1,236,103      |
| Loss per share                | \$0.02             | \$0.01             | \$0.01          | \$0.01           |

## Liquidity and Capital Resources

At January 31, 2017 the Company had \$419,676 in cash and cash equivalents, compared to 285,716 as at January 31, 2016. The consolidated working capital deficiency was \$6,226,766 at January 31, 2017 compared to \$6,947,026 as at January 31, 2016. The working capital decreased due to the increase in the customer deposit and the trade and other payables.

For the six months ended January 31, 2017, the Company had a net loss of \$2,507,244 and negative cash flow from operating activities of \$2,204,566 compared to a net loss of \$3,042,217 and negative cash flow from operating activities of \$2,136,895 for the same period in fiscal year 2016. As a result of recurring losses over the Company's history, the Company has accumulated deficit of \$83,675,267 as at January 31, 2017. The accounts payable and accrued liabilities have increased to \$4,753,268 as of January 31, 2017 compared to \$5,744,645 as of January 31, 2016.

Net cash generated by investing activities in the six months ended January 31, 2017 was \$ 29,713 as compared to cash flow from investing activities of \$4,422 in the same period of fiscal 2016. The investment activities include disposal of equipment.

Net cash provided by financing activities for the six months ended January 31, 2017, was \$2,019,882 compared to \$2,273,788 for the same period of fiscal 2016. The financing activities consisted of shares subscription received through private placements.

The Company has suffered recurring losses from operations and currently revenues do not generate enough cash to sustain its operations. Its ability to conduct operations, including the commercialization of its technologies, development of new technologies and the acquisition of additional technologies is dependent on its ability to raise funds as needed.

The Company has disclosed in Note 1(b) to the financial statements that there was substantial doubt as to the ability to continue as a going concern.

Management of the Company believes that it will be successful in meeting its business objectives and raising additional funds through private placements and sales revenue.

## Share Capital

Set out below is the outstanding share data of the Company as April 3, 2017. For additional details, see Notes 6 and 15 of the interim consolidated financial statements for January 31, 2017.

| At April 3, 2017               | Number outstanding |
|--------------------------------|--------------------|
| Common shares                  | 132,980,131        |
| Stock options                  | 7,350,000          |
| Common share purchase warrants | 33,765,040         |
| Agent's warrants               | 1,662,900          |

Outstanding options represent a total of 7,350,000 common shares issuable. At April 3, 2017; 7,350,000 of these options were exercisable and would provide proceeds of \$4,725,750 to the Company if all the vested options were exercised in full. The exercise of these options is completely at the discretion of the holders and the Company has no indication that any of these options will be exercised.

At April 3, 2017 the Company had outstanding 33,765,040 common shares purchase warrants of which 2,432,673 are exercisable at \$0.53 per share expiring on November 5, 2017; 3,084,000 are exercisable at \$0.53 per share expiring on December 15, 2017; 1,301,899 are exercisable at \$0.53 per share expiring on February 4, 2018; 3,828,570 are exercisable at \$0.50 per share expiring on November 6, 2018; 4,228,570 are exercisable at \$0.50 per share expiring on November 12, 2018; 5,003,073 are exercisable at \$0.50 per share expiring on November 28, 2018; 2,259,997 are exercisable at \$0.43 per share expiring on May 26, 2018; 2,989,333 are exercisable at \$0.43 per share expiring on June 20, 2018; 2,761,935 are exercisable at \$0.43 per share expiring on August 29, 2018; 1,000,000 are exercisable at \$0.43 per share expiring on November 18, 2018; 3,620,000 are exercisable at \$0.43 per share expiring on November 25, 2018; and 1,255,000 are exercisable at \$0.43 per share expiring on March 17, 2019.

At April 3, 2017 the Company had outstanding 1,662,900 agent's or finder's warrants of which 147,630 are exercisable at \$0.53 per share expiring on November 5, 2017; 215,880 are exercisable at \$0.53 per share

expiring on December 15, 2017; 47,724 are exercisable at \$0.53 per share expiring on February 4, 2018; 79,100 are exercisable at \$0.43 per share expiring on May 26, 2018; 101,127 are exercisable at \$0.43 per share expiring on June 20, 2018; 35,000 are exercisable at \$0.43 per share expiring on November 18, 2018; 115,033 are exercisable at \$0.43 per share expiring on November 25, 2018; 46,900 are exercisable at \$0.43 per share expiring on March 17, 2019; 158,200 are exercisable at \$0.30 per share expiring on May 26, 2018; 202,253 are exercisable at \$0.30 per share expiring on June 20, 2018; 190,535 are exercisable at \$0.30 per share expiring on August 29, 2018; 70,000 are exercisable at \$0.30 per share expiring on November 18, 2018; 230,067 are exercisable at \$0.30 per share expiring on November 25, 2018; and 23,450 are exercisable at \$0.30 per share expiring on March 17, 2019.

## Subsequent Events

On March 17, 2017, the Company completed the third tranche of share subscription agreements for the financing announced on November 7, 2016. Under the agreements, the subscribers purchased 1,255,000 units of the Company at a price of \$0.30 per unit, for gross proceeds of \$376,500. Each unit consists of one common share and one share purchase warrant. Each whole warrant entitles the holder to acquire one common share at an exercise price of \$0.43 per share for a period of 24 months after the date of the private placement. Pursuant to the closing of the financing, the Company paid finder's fees and agents commission of \$14,070 and issued 46,900 non-transferable finder's warrants. Each finder's warrant is exercisable into units at \$0.30 per unit for a 24 month period. Each unit consists of one common share and one half of a share purchase warrant. Each whole warrant is exercisable into one common share at \$0.43 per share before March 17, 2019. All shares and warrants are subject to a four-month hold period expiring on July 18, 2017.

## Financial Instruments

### (a) Credit risk:

Financial instruments that potentially subject the Company to concentration of credit risks include cash and restricted short term investments. The Company places its cash and restricted short term investments with high credit quality financial institutions. Short term investments are generally held in fixed rate securities. Concentration of credit risks with respect to receivables is limited.

### (b) Foreign exchange risk:

Foreign exchange risk is the risk that the fair value or future cash flow of a financial instrument will fluctuate because of changes in foreign exchange rate. The Company has significant operations in Singapore, which gives rise to significant foreign currency translation risks from fluctuations and volatility of foreign exchange rate between the Canadian dollar and the Singapore dollar (SGD). A significant change in the currency exchange rates between the SGD relative to the Canadian dollar could have an effect on the Company's financial performance, financial position and cash flows. The Company does not use derivative instruments to reduce its exposure to exchange rate risk.

### (c) Interest rate risk:

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. Short-term investments with fixed interest rates include guaranteed investment certificates with original maturities of greater than three months, exposing the Company to interest rate risk. The Company does not use financial instruments to mitigate this interest rate risk.

(d) Liquidity risk:

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they become due. The Company currently settles its financial obligations using cash and cash equivalents. The Company manages its liquidity risk by forecasting cash flows from operations and anticipating any investing and financing activities. Trade and other payables and Loans payable have contractual maturity of 6 months or less.

## Contractual Obligations

The following table summarizes the Company's contractual obligations as at January 31, 2017 and the effect such obligations are expected to have on our liquidity and cash flows in future years. The table excludes amounts already recorded in the consolidated balance sheet as current liabilities and certain other purchase obligations:

|                           | 2017      | 2018      | 2019      |
|---------------------------|-----------|-----------|-----------|
| <b>Rental leases</b>      | \$ 50,768 | \$ 33,830 | \$ -      |
| <b>Research Contracts</b> | \$ 41,000 | \$ 41,000 | \$ 41,000 |

Purchase orders for fourth party components, finished goods and other goods and services are not included in the above table. Management is not able to determine the aggregate amount of such purchase orders that represent contractual obligations, as purchase orders may represent authorizations to purchase rather than binding agreements. For the purpose of this table, contractual obligations for purchase of goods or services are defined as agreements that are enforceable and legally binding on the Company and that specify all significant terms, including: fixed or minimum quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction.

The Company has entered into contracts for other outsourced services. However, the obligations under these contracts are not significant and the contracts generally contain clauses allowing for cancellation without significant penalty. The expected timing of payment of the obligations discussed above is estimated based on current information. The timing of payments and actual amounts paid may be different depending on the time of receipt of goods or services, or for some obligations, changes to agreed-upon amounts.

On June 26, 2013 Zecotek Photonics Inc. entered into an agreement with Invention Development Management Company, LLC for collaboration on intellectual property strategy, including the sourcing, development and monetization of new invention related to photonics. The agreement will also provide the company with the opportunity to licence IP and technologies from IDMC's own portfolio of photonics related inventions and patents created with its network of inventors.

## Changes in Accounting Policies

Refer to the Company's audited annual consolidated financial statements for the year ended July 31, 2016, note 3 for recently adopted and future accounting pronouncements.

## **Audit Committee**

In compliance with the TSX Venture Exchange Policy 3.1 "Directors, Officers and Corporate Governance" section 10.1, the Audit Committee is comprised of three members, David Toyoda (independent), Canada; Dr. Jalil Ali (independent), Malaysia and Dr. A.F Zerrouk (CEO). Mr. Toyoda is the Chairman of the Audit Committee.

David Toyoda is a lawyer with a Bachelor of Commerce degree with honors and serves on several Boards as Director. Dr. A.F. Zerrouk has many years' experience serving on the board of high tech organizations, he is a technology developer and scientific entrepreneur and founder of various technology companies. Dr. Jalil Ali has held several faculty and research positions since 1987. He is a member of OSA, SPIE and the Malaysian Institute of Physics and was head of the technology transfer and innovation department at the University Technology Malaysia.

The Audit Committee will serve until the next Annual General Meeting at which time the new Board of Directors will appoint or re-appoint the Audit Committee.

## **Additional Information**

Additional information relating to the Company, including its audited year-end financial statements is available on SEDAR at [www.sedar.com](http://www.sedar.com).