
TITAN MEDICAL INC.

ANNUAL INFORMATION FORM
For the fiscal year ended December 31, 2016

March 31, 2017

**TITAN MEDICAL INC.
ANNUAL INFORMATION FORM**

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CORPORATE STRUCTURE

Name, Address and Incorporation

Titan Medical Inc. (“Titan” or the “Company” or “we”) is the successor corporation formed pursuant to two separate amalgamations (the “Amalgamations”) under the *Business Corporations Act* (Ontario) on July 28, 2008. The head office and registered office of Titan is located at 170 University Avenue, Suite 1000, Toronto, Ontario M5H 3B3. Titan’s main telephone number is (416) 548-7522.

The following is a brief description of the Amalgamations.

Synergist Medical Inc. (“Synergist”), Titan Medical Inc. (formerly, 2174656 Ontario Limited) (“Newco”) and KAM Capital Corp. (“KAM”) entered into an amalgamation agreement on June 23, 2008, pursuant to which on July 28, 2008 Synergist amalgamated with Newco, a wholly-owned subsidiary of KAM, to form a new corporation called Titan Medical Inc. (“Amalco”). Thereafter, Amalco amalgamated with KAM pursuant to a vertical amalgamation to form a new corporation called Titan Medical Inc.

Synergist was incorporated on July 5, 2002 and commenced operations on May 31, 2006 for the purpose of developing robotic surgical technology. KAM was incorporated on November 28, 2007 and filed and obtained a receipt for a final prospectus from certain Canadian securities regulatory authorities in compliance with the TSX Venture Exchange’s (“TSX-V”) Policy on Capital Pool Companies (“CPC Policy”). Newco was formed as a special purpose wholly-owned subsidiary of KAM incorporated for the purpose of effecting the Amalgamations. The Amalgamations constituted the Qualifying Transaction of KAM under the CPC Policy.

Intercorporate Relationships

Titan does not have any subsidiaries.

Currency

Effective January 1, 2014, the Company changed its functional and presentation currency from the Canadian dollar to the U.S. dollar, applied on a prospective basis in accordance with IAS 21. This change reflects the continuing increase in the Company’s costs being incurred in U.S. dollars, a trend which is expected to continue in the foreseeable future. All currency amounts in this annual information form are in U.S. dollars unless otherwise indicated.

CAUTION REGARDING FORWARD-LOOKING STATEMENTS

This annual information form and the documents incorporated by reference herein contain “forward-looking information”, concerning anticipated developments and events which the Company has a reasonable basis to believe may occur in the future. These forward-looking statements are made as of the date of this annual information form or, in the case of documents incorporated by reference herein, as of the date of such documents. Forward-looking statements are frequently, but not always, identified by words such as “expects”, “expectation”, “anticipates”, “believes”, “intends”, “estimates”, “predicts”, “continues”, “potential”, “targeted”, “plans”, “possible” and similar expressions (including negative and grammatical variations), or statements that events, conditions or results “will”, “may”, “could”, “would” or “should” occur or be achieved. Any forward-looking statements or statements of “belief”, including the statements made under “Risk Factors”, represent our estimates only as of the date of this annual information form, and should not be relied upon as representing our estimates as of any subsequent date. These forward-looking statements may concern anticipated developments in the Company’s operations in future periods, the adequacy of the Company’s financial resources and other events or conditions that may occur in the future, and include, without limitation, statements regarding:

- the Company’s technology and research and development objectives, including development milestones, estimated costs, schedules for completion and probability of success;

- the Company's intention with respect to updating any forward-looking statement after the date on which such statement is made or to reflect the occurrence of unanticipated events;
- the Company's expectation with respect to continuing animal study feasibility and commencing cadaver studies;
- the Company's expectation that pre-clinical animal data alone will be required, without the requirement for the initiation of human clinical studies for regulatory submissions;
- the Company's expectation with respect to launching a commercial product in certain jurisdictions;
- the Company's intentions to develop a robust training curriculum and post-training assessment tools;
- the Company's plans to develop and commercialize the SPORT Surgical System and the estimated incremental costs (including the status, cost and timing of achieving the development milestones disclosed herein);
- the Company's plans to design, create and refine software for production system functionality of the SPORT Surgical System and the estimated incremental costs (including the status, cost and timing of achieving the development milestones disclosed herein);
- the Company's intentions to complete heuristic and formative usability modules and human factors studies, formalize user requirements, stabilize the design and development of the system and initiate pre-clinical studies;
- the Company's intentions with respect to initiating marketing activities following receipt of the applicable regulatory approvals;
- the surgical indications for, and the benefits of, the SPORT Surgical System;
- the Company's intention to continue to assess specialized skill and knowledge requirements and recruitment of qualified personnel and partners;
- the Company's belief that the materials and parts necessary for the manufacture of a clinical-grade SPORT Surgical System will be available in the marketplace;
- the Company's belief that its existing and planned prototype units will be able to support human factors studies and pre-clinical testing activities in 2017;
- the Company's filing and prosecution of patent applications to expand its intellectual property portfolio as technologies are developed or refined;
- the Company's seeking of licensing opportunities to expand its intellectual property portfolio;
- the Company's intended use of proceeds of any offering of its shares;
- the Company's intention with respect to not paying any cash dividends on Common Shares in the foreseeable future;
- the Company's intention to retain future earnings, if any, to finance expansion and growth;
- the agreement with Longtai Medical Inc. ("Longtai") and the issuance of securities and related matters thereunder;
- projected competitive conditions with respect to the Company's products;
- the estimated size of the market for robotic surgical systems; and
- the potential market for warrants or units.

Forward-looking statements are statements about the future and are inherently uncertain, and actual results of the Company or other future events or conditions may differ materially from those reflected in the forward-looking statements due to a variety of risks, uncertainties and other factors, including those referred to in this annual information form, including but not limited to those described in the section titled, "Risk Factors" herein and therein, in any document incorporated by reference herein or therein, or listed from time to time in our reports, public disclosure documents and other filings with the securities commissions in Canada. These risks include, but are not limited to:

- Additional Financing
- History of Losses
- Going Concern
- Strategic Alliances
- Dependence on Key Personnel
- Ability to Attract Qualified Employees to Maintain and Grow Business
- Disclosure of Trade Secrets and Other Proprietary Information

- Dependence on Third Parties
- Competition
- Infringement of Intellectual Property Rights
- Intellectual Property
- Current Global Financial Conditions
- Trademarks
- Recent Changes in Senior Management of the Company
- Conflicts of Interest
- Results of Operations
- Rapidly Changing Markets Make it Difficult to Forecast Future Operating Results
- Uncertain Market/Uncertain Acceptance of the Company's Technology/Target Market
- Technological Advancements
- Insurance and Uninsured Risks
- Ability to License Other Intellectual Property Rights
- Government Regulation
- Profitability
- Changes in Government Policy
- Changes in Accounting and Tax Rules
- Contingent Liabilities
- Uncertainty as to Product Development and Commercialization Milestones
- Product and Services Not Completely Developed
- Manufacturing Risks
- Reliance on External Suppliers and Development Firms
- Product Defect Risk
- Suppliers
- Stock Price Volatility
- Future Share Sales
- Limited Operating History
- Fluctuating Financial Results
- Effect of Estimates Regarding Milestones
- Currency Fluctuations

Forward-looking statements are based on a number of assumptions which may prove to be incorrect, including but not limited to assumptions about:

- general business and current global economic conditions;
- future success of current research and development activities;
- achieving development and commercial milestones;
- inability to achieve produce cost targets;
- competition;
- changes to tax rates and benefits;
- the availability of financing;
- the Company's and competitors' costs of production and operations;
- the Company's ability to attract and retain skilled employees;
- the Company's ongoing relations with its third-party service providers;
- the design of the SPORT Surgical System and related platforms and equipment;
- the progress and timing of the development of the SPORT Surgical System;
- costs related to the development, completion and potential commercialization of the SPORT Surgical System;
- receipt of all applicable regulatory approvals;
- estimates and projections regarding the robotic surgery equipment industry;
- protection of the Company's intellectual property rights;
- market acceptance of the Company's systems under development; and

- the type of specialized skill and knowledge required to develop the SPORT Surgical System and the Company's access to such specialized skill and knowledge.

We caution that the foregoing list of important factors and assumptions is not exhaustive. Although the Company has attempted to identify on a reasonable basis important factors and assumptions related to forward-looking statements, there can be no assurance that forward-looking statements will prove to be accurate, as events or circumstances or other factors could cause actual results to differ materially from those estimated or projected and expressed in, or implied by, these forward-looking statements. Other than as specifically required by law, the Company undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made, or to reflect the occurrence of unanticipated events, whether as a result of new information, future events or results or otherwise. Accordingly, readers should not place undue reliance on forward-looking statements.

DEVELOPMENT OF THE BUSINESS

Three Year History

The Company's activities over the last three years have focused on developing its technology and technical capabilities, developing strategic relationships, securing its intellectual property and raising equity capital.

2016

The Company's business is focused on research and development through to the commercialization of computer-assisted robotic surgical technologies for application in minimally invasive surgery ("MIS"). The Company is presently developing a single-port robotic surgical system, the SPORT Surgical System. The SPORT Surgical System is comprised of a surgeon-controlled patient cart that includes a 3D high definition vision system and multi-articulating instruments for performing surgical procedures, and a surgeon workstation that provides the surgeon with an advanced ergonomic interface to the patient cart and a 3D endoscopic view inside the patient's body during MIS procedures.

The Company had previously announced plans to build first-in-human units in the first quarter of 2016 after the completed build of the two engineering verification ("EV") units. However, due to the revision of the development path discussed below, the first-in-human units were repurposed as EV units and were completed during the first quarter of 2016. The EV units incorporate substantially all of the previous design and engineering work completed on the SPORT Surgical System and may be used for pre-clinical live animal and human cadaver studies. The live animal and human cadaver studies are expected to provide comprehensive and high quality information to have a positive contribution toward anticipated regulatory submissions to the FDA and European regulatory authorities for the CE Mark.

In the first quarter of 2016, in consultation with its advisors, the Company and its principal development firm, Ximedica, re-engineered and optimized the 2016 development plan. This was done partially in view of observations related to the experiences of other robotic surgery competitors in dealing with regulatory authorities and published changes to the U.S. Food and Drug Administration ("FDA") guidelines, "Applying Human Factors and Usability Engineering to Medical Devices", issued February 3, 2016, and effective April 3, 2016. The Company reviewed the FDA's new guidelines and incorporated additional procedures and documentation into its human factors and usability studies in an effort to comply with the new guidelines. Consequent to this as well as further engineering development initiatives, the Company determined the total costs for it to reach submission of a 510(k) application to the FDA would increase significantly from the Company's previously published estimate. The Company therefore withdrew all prior milestone charts set forth in the Company's Management's Discussion and Analysis and Annual Information Form in respect of the year ended December 31, 2015 and those set forth in its prospectus supplements respectively dated February 9, 2016 and March 24, 2016.

The amounts and timing of Titan's actual expenditures will depend upon numerous factors, including the status of its development and commercialization efforts and the amount of cash generated through any strategic

collaborations into which it may enter. Through the engineering development and human factors exercises completed to date, the Company has developed a clearer understanding of user requirements, technical challenges and their associated risks and has identified opportunities to more efficiently utilize internal and external resources in order to complete product development toward commercialization of its product.

In the second quarter of 2016, the Company entered into a manufacturing and supply agreement with an established U.S.-based contract manufacturer (the “Contract Manufacturer”) for the future manufacturing of the SPORT Surgical System. In addition to providing manufacturing expertise, the Contract Manufacturer is expected to participate in the final stages of development and design for manufacturing of the SPORT Surgical System.

Among other things, the future success of the Company is substantially dependent on continuing its research and development program, including the ongoing support of any outsourced research and development suppliers. The principal development firm and the Contract Manufacturer engaged by the Company have expressed their concerns over the limited financing available to the Company, following periods of reduced program funding in 2016.

During the second half of 2016, the work performed by Ximedica and the Contract Manufacturer engaged by the Company for design and development of the SPORT Surgical System was reduced until such time that the Company received sufficient financing to cover work orders projected over a six-month period. Subsequent to an offering by the Company that closed in October 2016, both firms were re-engaged to resume development of the SPORT Surgical System at a rate consistent with the level of financing raised and acceptable to both Ximedica and the Contract Manufacturer. This scaled-back rate of program funding was intended as a short-term solution to maintain momentum in critical path human factors studies until accelerated product development could be resumed with adequate funding in 2017.

Previously, the Company had forecast specific milestones for completion in 2016. Due in part to scaled back development, several of these milestones were not completed. In particular, the Company proposed the build of a fifth engineering verification unit, (“EV5”), in the second half of 2016. Based upon imminent design changes, the Company deemed that the build of an EV5 unit would have little value and indeed could have even diverted precious engineering and financial resources from making progress on known iterative design improvements. It has been determined that the assembly of additional EV units is not necessary at this time. The Company already has working prototype units that it believes can be upgraded and made to support human factors studies and anticipated pre-clinical testing activities in 2017.

Subsequent to the filing of the Company’s prospectus supplement dated September 13, 2016 and its management’s discussion and analysis in respect of the three and nine months ended September 30, 2016, and following the resignations of the Company’s former Executive Vice President of Regulatory Affairs and the Company’s former Chief Executive Officer, the Company completed a detailed review of its development plan and its then current milestones. With the appointment of the Company’s new Chief Executive Officer, David McNally, effective January 3, 2017, the development review was extended and increased in scope which resulted in the Company’s decision to revise its interim development milestones. Consequently, the milestones set forth in the prospectus supplement dated September 13, 2016 and its management’s discussion and analysis in respect of the three and nine months ended September 30, 2016 have been withdrawn and replaced with the new milestones contained in this annual information form.

The Company had also forecast that it would complete heuristic studies, which are precursors to the more formal formative usability studies, in 2016. A heuristic study is a “hands-on” or interactive approach to learning, and a process in which technical personnel evaluate a device’s user interface against design principles, rules or “heuristic” guidelines. The object is to evaluate the overall user interface, and identify possible weaknesses in the design, especially when use error could lead to patient or operator harm. Heuristic studies include careful consideration of accepted concepts for design of the user interface. Formative studies involve more in-depth evaluation of the user interface by “subject matter experts”, which may include surgeons, nurses, and operating room technicians. The rigorous nature of formative studies with participation by clinical experts typically drives significantly higher associated expenses than heuristic studies. Therefore, it is most efficient to gain insights from heuristic studies before proceeding to formative studies.

Specifically, the Company had forecast the completion of two heuristic usability modules in the second half of 2016. These heuristic usability modules were completed, however the results of the studies yielded opportunities to improve the design of the product. Therefore, after making changes to system prototypes, two additional heuristic modules were completed by the end of 2016, for a total of four heuristic usability modules performed in 2016. The Company now expects to proceed to complete two formative usability modules in the first half of 2017, promptly following a final analysis of the first four heuristic usability modules.

The Company's financings in 2016 included:

- In February 2016, the Company completed a prospectus qualified offering of 11,670,818 units and the issuance and sale of an additional 1,746,789 units pursuant to the over-allotment option granted to the agent in connection with the offering for total gross proceeds of U.S.\$8,732,038. Each unit consisted of one Common Share and one warrant. Each warrant entitles the holder to purchase one additional Common Share for CDN\$1.00 and will expire February 12, 2021.
- In March 2016, the Company completed a prospectus qualified offering of 15,054,940 units for gross proceeds of U.S.\$11,607,359. Each unit consisted of one Common Share and one warrant. Each warrant entitles the holder to purchase one additional Common Share for CDN\$1.20 and will expire March 31, 2021. In April 2016, the Company completed the issuance and sale of 2,258,241 additional units pursuant to the over-allotment option granted to the agent in connection with the offering for gross proceeds of U.S.\$1,759,396.
- In September 2016, the Company completed a prospectus qualified offering of 17,083,333 units for gross proceeds of U.S.\$7,490,000. Each unit issued consisted of one Common Share and one warrant. Each warrant entitles the holder to purchase one additional Common Share for CDN\$0.75 and will expire September 20, 2021. In October 2016, the Company completed the issuance and sale of 2,030,000 additional units pursuant to the over-allotment granted to the agent in connection with the offering for gross proceeds of U.S.\$909,846.

2015

After completing the design and test of a feasibility prototype of the SPORT Surgical System in the first quarter of 2015, the Company completed the build of two engineering verification units in the fourth quarter of 2015.

In the first half 2015, the Company entered into an agreement with the James and Sylvia Earl, Simulation to Advance Innovation and Learning (SAIL) Center at Anne Arundel Medical Center (AAMC) in Annapolis, MD, for the development of the training curriculum and post-training assessment of surgeons and surgical teams who would use the SPORT Surgical System. The agreement however was suspended in 2017 by mutual consent with a view to the Company's principal objective to focus its resources on advancing the development of the SPORT Surgical System.

In the first half of 2015, the Company also entered into an option agreement (the "Technology Option Agreement") with Platform Imaging, LLC ("Platform") whereby Platform granted the Company an option (the "Option") to negotiate a license agreement ("License Agreement") to have exclusive rights to practice the inventions set forth in the patents for Markerless Tracking of Robotic Surgical Tools for incorporation in the Company's SPORT Surgical System and to distribute such product thereafter. Under the terms of the Technology Option Agreement, the Company paid to Platform a non-refundable option fee of \$300,000 as follows: (i) \$100,000 upon signing the Technology Option Agreement; (ii) \$100,000 on January 2, 2016; and (iii) \$100,000 on October 1, 2016. In addition, the Company had the right at any time up to and including February 2, 2017, to exercise the Option by paying a fee of \$1.3 million (the "License Fee") for the rights under the License Agreement, payable upon execution of a License Agreement. Prior to February 2, 2017, Titan gave notice that it would not exercise the option. A former member of the Company's senior management was also a director, member of the Platform senior management team, co-inventor of the technology, co-founder of Platform and a significant shareholder of Platform.

In the third quarter of 2015, the Company entered into an agreement with BSI Group America Inc. (“BSI”), a recognized European Notified Body, for BSI to perform the necessary assessments to certify Titan’s quality management system for compliance with international and European requirements, as required for medical devices marketed in the European Union.

On September 7, 2015, the Company entered into a master services agreement with Chiltern International, Inc. (“Chiltern”), formerly Theorem CR, Inc., which would allow the parties to negotiate the provision of clinical trial research services to be provided by Chiltern to Titan from time to time, without having to re-negotiate the terms and conditions for each such service. This agreement was terminated by the Company in the third quarter of 2016.

On November 30, 2015, the Company entered into an agreement with Cadence Device, Inc., a wholly-owned subsidiary of Cadence, Inc. (“Cadence”). Under the terms of that agreement, Cadence agreed to develop, manufacture and manage the supply chain, sterilization and distribution for multi-articulating robotic instruments for use with Titan’s SPORT Surgical System.

The Company entered into a license agreement with Mayo Foundation for Medical Education and Research effective December 14, 2015, pursuant to which the Company received certain rights to intellectual property developed by David W. Larson, M.D., Mayo Clinic. On March 28, 2017, the Company provided notice that it will no longer continue with the license agreement and associated payments.

The Company’s financings in 2015 included:

- On October 30, 2015, the Company entered into a letter agreement (the “Letter Agreement”) with Longtai Medical Inc. Under the terms of the Letter Agreement, on November 23, 2015, Longtai subscribed for and purchased US \$4,000,000 worth of Common Shares under a private placement, at a subscription price of CDN \$1.23 per Common Share. In the Letter Agreement, the Company granted to Longtai exclusive rights to negotiate with the Company for an exclusive marketing, sales and distribution agreement for the Company’s SPORT Surgical System in the Asia Pacific region (the “Distributorship Agreement”) for a period of 183 days commencing at closing of the private placement. Additionally, Longtai paid to the Company U.S.\$2,000,000 as a deposit toward the Distributorship Agreement (“Distributorship Deposit”), which is required to be repaid to Longtai in the event that the Distributorship Agreement is not entered into within such 183 day period. On May 24, 2016, the Company and Longtai executed a three month extension of the exclusive rights granted to Longtai to negotiate the Distributorship Agreement and for the repayment of the Distributorship Deposit to Longtai, extending the negotiation period and the date for repayment of the Distributorship Deposit to August 19, 2016. On August 24, 2016, Titan announced that it had agreed to extend the exclusive rights granted to Longtai to negotiate the Distributorship Agreement from the previous three month extension to monthly progress reviews. There is no assurance that the parties will be able to negotiate and enter into the Distributorship Agreement and the Company may be required to return the U.S.\$2,000,000 deposit to Longtai.
- In November 2015, the Company completed a prospectus qualified offering of 9,349,593 units for gross proceeds of U.S.\$8,611,901. Each unit issued consisted of one Common Share and 0.75 of a Warrant. Each such whole Warrant entitles the holder thereof to purchase one additional Common Share for CDN\$1.60 and will expire November 16, 2020.

2014

During 2014, the Company was principally engaged in the research and development of robotic surgical technologies in conjunction with its SPORT Surgical System. After building an alpha commercial prototype of the SPORT Surgical System, Titan completed animal tissue studies including performing a full cholecystectomy (gallbladder removal) procedure using the prototype for the required surgical tasks (including grasping, dissecting, monopolar cautery and suturing).

Effective at market opening on September 30, 2014, Titan’s common shares and warrants commenced trading on the Toronto Stock Exchange (“TSX”) and concurrent with the TSX listing, the Company’s common shares and warrants were de-listed from the TSX Venture Exchange.

During the year, Titan decided to pursue a broader set of surgical indications for the SPORT Surgical System, including general abdominal, gynecologic, and urologic procedures and the Company built additional prototypes and developed more advanced instruments and training systems for expanded use in additional surgical procedures.

The Company's financings in 2014 included:

- In February 2014, the Company completed a prospectus qualified offering of 9,142,500 units for gross proceeds of U.S.\$11,588,677. Each unit consisted of one Common Share and one warrant. Each warrant entitled the holder thereof to purchase one additional Common Share for CDN\$2.00 and expired on February 19, 2017.
- In April 2014, the Company completed a prospectus qualified offering of 12,203,189 Units for gross proceeds of U.S.\$23,232,936. Each unit consisted of one Common Share and one Warrant. Each warrant entitles the holder thereof to purchase one additional Common Share for CDN\$2.75 and will expire April 23, 2017.

Significant Acquisitions

There were no significant acquisitions completed by Titan during its most recently completed financial year for which disclosure is required under Part 8 of National Instrument 51-102 – *Continuous Disclosure Obligations*.

DESCRIPTION OF THE BUSINESS

Product Development

The Company's business is focused on research and development through to the planned commercialization of computer-assisted robotic surgical technologies for application in minimally invasive surgery ("MIS"). The Company is currently developing the SPORT Surgical System, a single-port robotic surgical system. The SPORT Surgical System is comprised of a surgeon-controlled patient cart that includes a 3D high definition vision system and multi-articulating instruments for performing MIS procedures, and a surgeon workstation that provides the surgeon with an advanced ergonomic interface to the patient cart and a 3D endoscopic view inside the patient's body during MIS procedures. With the SPORT Surgical System, the Company aims to pursue a broad set of surgical indications, including general abdominal, gynecologic and urologic procedures.

Development of the SPORT Surgical System has proceeded in response to "voice of customer" feedback and, consultation with medical technology development firms and input from the Company's Surgeon Advisory Board (the "Surgeon Advisory Board") comprised of key opinion leaders in targeted fields. This approach has allowed the Company to design a robotic surgical system that is intended to include the traditional advantages of robotic surgery including 3D stereoscopic imaging and restoration of instinctive control, as well as new and enhanced features, including an advanced surgeon workstation incorporating a 3D high definition display providing a more ergonomically friendly user interface and a patient cart with improved instrument dexterity. Overall, the surgical system is designed to be adapted to the needs of the surgeon, rather than the surgeon having to adapt to the system.

The SPORT Surgical System patient cart is being developed to deliver interactive multi-articulating instruments and a 3D high definition vision system into a patient's abdominal body cavity through a single access port. The design of the patient cart includes an insertion tube of approximately 19 millimeter (mm) diameter, capable of insertion into the patient's body cavity through a skin incision of approximately 25 mm. The insertion tube includes a collapsible distal end portion incorporating a 3D high definition camera module that once inserted, is configured to deploy into a working configuration wherein the camera module and multi-articulating instruments can be controlled by a surgeon via the workstation. The reusable multi-articulating, snake-like instruments are designed to couple with sterile detachable single patient use robotic end effectors that would provide first use quality in every case and eliminate the reprocessing of the complete instrument. The use of reusable (re-usable for a specific number of uses) robotic instruments and single patient use end effectors is intended to minimize the cost per procedure. The patient cart is also designed to include a mast, a boom and wheels for optimal configurability for a variety of surgical

indications and the ability to be maneuvered within the operating room, or redeployed within hospitals and surgical centers, where applicable.

As part of the development of the SPORT Surgical System, the Company plans to develop a robust training curriculum and post-training assessment tools for surgeons and surgical teams. The proposed training curriculum will likely include cognitive pre-training, psychomotor skills training, surgery simulations, live animal and human cadaver lab training, surgical team training, troubleshooting and an overview of safety. Post-training assessment will include validation of the effectiveness of those assessment tools.

The Company continuously evaluates its technologies under development for intellectual property protection. As of December 31, 2016, the Company has ownership or certain exclusive rights to 14 patents and 32 patent applications. The Company anticipates expanding its intellectual property portfolio by filing additional patent applications as it progresses in the development of robotic surgical technologies, acquiring and/or by licensing suitable technologies. The Company previously entered into exclusive license agreements with several organizations including the Trustees of Columbia University. The agreement with Columbia University provides the Company with certain rights for the development and commercialization of robotic surgical technology for use in single port surgery, providing a basis for the development of the SPORT Surgical System.

As part of its development and commercialization efforts, the Company has established certain milestones that it uses to assess its progress towards developing commercially viable robotic surgical technologies. These milestones relate to technology and design advancements as well as to targeted dates for pre-clinical studies and completion of regulatory submissions. To assess progress, the Company regularly tests and evaluates its technology. If such evaluations indicate technical defects or failure to meet cost or performance goals, the Company's commercialization schedule could be delayed and potential purchasers of its initial commercial systems may decline to purchase them or may choose to purchase alternative technologies. See "Risk Factors".

Development Objectives

The Company employs a combination of internal resources and external development firms to execute the research, development and commercialization plan for the Company's robotic surgical system.

At this time, the Company's primary development objectives and milestones in 2017 will be to advance human factors studies, formalize user requirements, stabilize the design and development of the system, and initiate pre-clinical studies. Pre-clinical studies performed in live animal subjects by surgeons with fully-functional prototypes can provide valuable insights regarding system performance, as well as the suitability of related surgical accessories, during representative surgical procedures under controlled laboratory conditions.

It has been determined that the build of additional engineering verification units as previously planned and disclosed are not necessary. The Company believes it is in a position where it can upgrade existing prototype units to current levels of performance which will provide a sufficient number of prototype units to accomplish immediate goals of commencing pre-clinical studies in 2017.

Based on the evolution of the SPORT design, the creation and refinement of software for production system functionality has not yet commenced. As the system design matures early in the year, the Company plans to commence this process in the first half of 2017, and anticipates that it will continue as an intensive, ongoing process through the balance of 2017 with anticipated completion in 2018. As software development is a parallel effort, it is anticipated that insights gained from human factors and pre-clinical studies will provide opportunities to optimize the system for clinical use.

The Company estimates that it will require a minimum of approximately U.S.\$10 million to fund its development milestones for the first half of 2017, specifically, those related to the advancement of the human factors and usability studies and finalization of user requirements for the first generation SPORT Surgical System. It is further estimated that a minimum of an additional U.S.\$18 million will be required to fund development and pre-clinical animal studies during the second half of 2017.

Although an estimate of the timing and costs for the development milestones in 2017 and beyond remains highly speculative, the Company presently estimates that a total of U.S.\$75 million of additional capital (including the U.S.\$10 million and U.S.\$18 million amounts noted above), will be required to fund development work through submission of the 510(k) application to the FDA and submittal to European authorities for the CE Mark, which are projected by year-end 2018. However, given the uncertainty of, among other things, product development timelines, regulatory requirements, the timing and number of future animal and human cadaver studies that may be required and the availability of required capital to fund development and operating costs, the actual costs and development times may exceed management's current expectations.

In addition to being capital intensive, research and development activities relating to the Company's SPORT surgical robot, which is a highly complex medical device are inherently uncertain as to future success and the achievement of desired results. If delays or problems occur during the Company's ongoing research and development activities, financial and human resources may need to be diverted toward resolving such delays or problems. Further, there is material risk that the Company's research and development activities may not result in a functional, commercially viable product or one that is approved by regulatory authorities. Please see "Risk Factors".

Current Development Plan

The Company's current plan is to raise sufficient financing and to continue the development and commercialization of the SPORT Surgical System at estimated incremental costs, and according to the timeline, as set forth in the table below.

The Company anticipates costs to the end of 2017 related to the commercialization and regulatory clearance of the SPORT system to be as set out in the table below.

| <i>Development Milestones</i> | <i>Estimated Cost (in U.S. \$ million)</i> | <i>Schedule for Milestone Completion</i> | <i>Comments</i> |
|---|--|--|------------------|
| Units built and ready for engineering verification (Prototype is formally tested to meet previously defined specifications) | | | |
| Build two EV units | - | Q4 2015 | <i>Completed</i> |
| Build additional EV units | - | Q1 2016 | <i>Completed</i> |
| Perform initial heuristic human factors and usability studies | - | Q2 2016 | <i>Completed</i> |
| Complete human factors and usability studies | | | |
| Finalize user requirements for 1 st generation robotic surgical system | 4.5 | Q1 2017 | <i>Completed</i> |
| Select and confirm strategic facilities for pre-clinical studies in US and Europe | 0.5 | Q2 2017 | |
| Test and evaluate performance of subsystems of existing EV units | 1.8 | Q2 2017 | |
| Complete initial formative human factors studies | 2.0 | Q2 2017 | |
| Initiate design changes based on subsystem performance and human factors evaluation | 1.0 | Q2 2017 | |
| Implement design changes and retest system and subsystems | 8.7 | Q3 2017 | |
| Update Design History File and documentation for relevant modules of Company Quality | | Q3 2017 | |

| <i>Development Milestones</i> | <i>Estimated Cost (in U.S. \$ million)</i> | <i>Schedule for Milestone Completion</i> | <i>Comments</i> |
|--|--|--|-----------------|
| Management Systems (“QMS”) Complete initial requirements and architecture for simulation software and training program design | | Q3 2017 | |
| Complete and report on pre-clinical animal studies at strategic facilities in US and Europe Confirm FDA and CE Mark pathways in coordination with regulatory authorities | 9.2 | Q4 2017 Q4 2017 | |
| Complete software development, system design and update Design History File for regulatory filing Complete summative human factors evaluation Complete simulation software development and training program design Complete and document pre-clinical studies for FDA submittal Prepare and submit 510(k) application to FDA and prepare technical file for CE Mark and submit to European Notified Body Publish white papers on pre-clinical studies | TBD ⁽¹⁾ | 2018 | |
| Anticipated receipt of FDA 510(k) clearance and CE Mark Perform successful human surgeries at initial US and European training centres | TBD ⁽¹⁾ | 2019 | |
| TOTAL | TBD ⁽¹⁾ | | |

Notes:

(1) A specific schedule for milestone completion cannot be estimated at this time as it is dependent upon receipt of additional funding.

Upon completion of the development of the SPORT Surgical System and following receipt of all applicable regulatory approvals in the United States, Europe, and/or Asia, the Company intends to utilize a direct sales force and/or distribution partner(s) to initiate marketing the SPORT Surgical System to hospitals.

Due to the nature of technology research and development, there is no assurance that these objectives will be achieved, and there can be no assurance with respect to the time or resources that may be required. The Company expects that additional specific milestones could be identified as the development of its SPORT Surgical System progresses, or existing milestones, budgets and the schedule for completion of each milestone may change depending on a number of factors including the results of the Company’s development program, the availability of financing and the ability of development firms engaged by the Company to completed work assigned to them. The total costs to complete the development of the Company’s SPORT Surgical System as referenced above are only an estimate based on current information available to the Company and cannot yet be determined with a high degree of certainty, and the costs may be substantially higher than estimated. Please see “*Caution Regarding Forward-Looking Statements*” and “*Risk Factors*”.

Market Opportunity

The Company's robotic surgical system is being designed to address the growing robotic surgery market. The size of the market for robotic surgical systems is estimated by Grand View Research Inc. ("Grand View") to grow from approximately US \$7.5 billion in 2014 to US \$17.9 billion by 2022. See Grand View's report entitled "Medical Robotic Systems by Product (Surgical, Orthopedic, Laparoscopy, Neurological, Rehabilitation, Assistive, Prosthetics, Orthotics, Steerable, Therapeutic, Exoskeleton, Non-Invasive, Hospital/Pharmacy, Telemedicine, I.V, Pharmacy, Emergency Response Robotic Systems) – Analysis and Segment Forecasts to 2022" dated August, 2015, excerpts of which may be viewed at www.grandviewresearch.com.

Robotic Surgery

Surgery has traditionally been performed through large, open incisions. Over the past 25 years, minimally invasive techniques and devices have been employed to minimize the size of incisions, reduce trauma to patients, and in turn, reduce associated pain, accelerate healing, shorten recovery times and produce smaller scars. Some of these benefits, such as shorter recovery times and reduced pain leading to shorter hospital stays, are directly associated with lower costs of care. However, minimally invasive surgery ("MIS") requires special tools to operate through small ports in the body, and advanced training for surgeons to manipulate those tools while viewing a two-dimensional image of the patient's internal anatomy on a monitor. As a result, consistent outcomes improvements are demonstrated by the most skilled and experienced surgeons, and less reliably by those less experienced. For these reasons, the acceptance of MIS has not broadly increased in more complex surgeries.

The shortcomings of both open surgery and MIS have led to the introduction of robots within the surgical environment. Robotic or computer-assisted surgical technologies represent the next generation in the evolution of advanced surgical care. The objectives of robotic systems are to provide surgeons with tools to allow complex procedures to be performed repeatedly with greater precision and dexterity, while offering improved vision and control. The use of robotics is intended to empower surgeons to employ improved techniques for minimally invasive surgery, and assist in reducing the risks associated with complex MIS surgeries.

Market Acceptance

To date, robotic surgical technologies have been employed in urology, gynecology, colon and rectal surgery, cardiothoracic surgery, general surgery, head and neck surgery, orthopedic surgery, neurosurgery, and catheter-based interventional cardiology and radiology.

The success of robotic technologies in these applications has led to the growing adoption and commercialization of these technologies in the medical industry. Although robotic surgical procedures have been gaining substantial acceptance, the industry is still in its infancy. The available technology is evolving along with advancements in imaging and computer-machine controls to overcome technical challenges. Current objectives include overcoming the limitations of multi-port access, limited dexterity and visualization.

Competitive Conditions

The industry leader within the robotic surgical market is Intuitive Surgical, Inc. (NASDAQ: ISRG), manufacturer of the da Vinci® Surgical System. In addition, there are a number of companies reported to be currently using or planning to use robots or computers in surgery, including TransEnterix Inc. (Senhance™ Surgical Robotic System), Medtronic, Inc., Medrobotics Corporation (Flex® Robotic System), Verb Surgical Inc. (a collaboration between Alphabet Inc.'s Verily division (formerly, Google Life Sciences) and Ethicon, a division of Johnson & Johnson), and South Korea's Meere Company Inc. (Eterne robotic system).

In 2016, Zimmer Biomet announced the purchase of France's MedTech, the maker of the ROSA™ surgical robot for minimally invasive neurosurgical procedures which was sold and used for the first time, in 2016. In early 2016, TransEnterix announced that its SurgiBot System did not receive FDA clearance and that TransEnterix would instead focus its efforts on obtaining FDA approval for its Senhance™ Surgical Robotic System.

Any company with substantial experience in robotics or complex medical devices could potentially expand into the field of surgical robotics and become a future competitor.

Regulation

United States Regulatory Process

In the United States, the Company's surgical system will be subject to regulation by the FDA. Management expects that under the FDA guidelines, the surgical system will be classified as a Class II medical device. Class II devices are those which are subject to the general controls and require premarket demonstration of adherence to certain performance standards or other special controls, as specified by the FDA, and clearance by the FDA. Premarket review and clearance by the FDA for these devices is accomplished through the 510(k) premarket notification process. For most Class II devices, the manufacturer must submit to the FDA a premarket notification submission, demonstrating that the device is "substantially equivalent" in intended use and technology to a "predicate device" that is either:

- (1) a device that has grandfather marketing status because it was legally marketed prior to May 28, 1976, the date upon which the Medical Device Amendments of 1976 were enacted, or
- (2) a Class I or II device that has been cleared through the 510(k) process.

The FDA may require further information, including clinical data, to make a determination regarding substantial equivalence. If the FDA determines that the device, or its intended use, is not "substantially equivalent" (as such term is defined by the FDA), the FDA may place the device, or the particular use of the device, into Class III, and the device sponsor must then fulfill much more rigorous pre-marketing requirements.

After a device receives 510(k) clearance, any modification that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, would require a new 510(k) clearance or could require a pre-market approval application. The FDA requires each manufacturer to make this determination in the first instance, but the FDA can review any such decision. If the FDA disagrees with a manufacturer's decision not to seek a new 510(k) clearance, the agency may retroactively require the manufacturer to seek 510(k) clearance or pre-market approval. The FDA may also require the manufacturer to cease marketing and/or recall the modified device until 510(k) clearance or pre-market approval is obtained.

European Union and Canada Regulatory Process

Medical devices in the European Union ("EU") are regulated under EU Council Directive 93/42/EEC as amended by 2007/47/EC, also referred to as Medical Device Directive or MDD, and must bear the CE Mark prior to being placed on the market. In order to affix the CE Mark on products, a recognized European Notified Body must certify a manufacturer's quality management system for compliance with international and European requirements. Any modifications of existing products or development of new products in the future will require permission to affix the CE Mark to such products.

In order to commercialize products in Canada, regulatory approval from Health Canada (Therapeutic Products Directorate, Medical Devices Bureau) is required. Medical device licence applications must contain a valid ISO 13485:2003 certificate issued by a Health Canada recognized registrar under the Canadian Medical Devices Conformity Assessment System (CMDCAS). Evaluation of product safety and effectiveness is completed by Health Canada.

Specialized Skill and Knowledge

The research and development of the Company's surgical system requires specialized skill and knowledge. We believe the required skill and knowledge to carry out the current stage of research and development is available to the Company, through its current officers, employees and external medical technology development firms. The Company will continue to assess its requirements and recruit and engage required qualified personnel and

development firms as needed, subject to budget limitations. If the final research and development stage is successfully completed and the clinical-grade SPORT Surgical System is developed, it is believed that the materials and parts necessary for the manufacture of the product will be available in the marketplace. However, there is no assurance in this regard as the research and development program may, in the future, reveal requirements for new materials and parts that have not been identified to date.

Intellectual Property Protection

The Company continuously evaluates its technologies under development for intellectual property protection. In accordance with industry practice, the Company's proprietary rights are currently protected through a combination of copyright, trade-mark, patents, trade secret laws and contractual provisions.

Patent applications are filed in various jurisdictions internationally, which are selectively chosen having regard to the likely value and enforceability of intellectual property rights in those jurisdictions, and to strategically reflect the Company's anticipated principal markets. Patents provide the Company with a potential right to exclude others from incorporating the Company's technical innovations into their own products and processes. Where appropriate, the Company licenses third party technologies to provide the Company with the flexibility to adopt preferred technologies.

As of the December 31, 2016, the Company had ownership of certain exclusive rights to 14 patents and 32 patent applications. The Company anticipates expanding its intellectual property portfolio by filing additional patent applications as it progresses in the development of robotic surgical technologies, acquiring and/or by licensing suitable technologies.

The scope of protection obtained, if any, from the Company's current or future patent applications may not be known for several years. Moreover, there is no assurance that any patents will be issued with respect to any such patent applications, and if patents are issued, they may not provide the Company with the expected competitive advantages, or they may not be issued in a manner that gives the Company the protection that it seeks, or they may be successfully challenged by third parties.

The Company also seeks to avoid disclosure of its intellectual property and proprietary information by requiring employees and consultants to execute non-disclosure and assignment of intellectual property agreements. Such agreements also require the Company's employees and consultants to assign to the Company all intellectual property developed in the course of their employment or engagement. The Company also utilizes non-disclosure agreements to govern interaction with business partners and prospective business partners and other relationships where disclosure of proprietary information may be necessary, and the Company takes measures to carefully protect its intellectual property rights in its supplier agreements with external development firms.

Operations

The Company develops its core technologies through a combination of in-house personnel and selected external engineering and medical technology development and manufacturing firms. Certain components of the Company's robotic surgical system are being developed to the Company's specifications by various third party suppliers, medical technology development and manufacturing firms through purchase orders and it does not have long-term contracts with any third parties.

The Company maintains its head office at subleased premises in Toronto, Ontario.

Employees

As of December 31, 2016, the Company had a total of 10 full-time employees and two consultants.

Surgeon Advisory Board

The Company has assembled a surgeon advisory board consisting of the following surgeons who are widely regarded as leaders in the field of medical robotics or fields of surgery where robotics are expected to have a significant impact:

Arnold Advincula, M.D.

Dr. Advincula is Vice-Chair of Women's Health & Chief of Gynecology at the Sloane Hospital for Women, Columbia University Medical Center/New York Presbyterian Hospital. Formerly, he was Professor of Obstetrics and Gynecology, Director of the Minimally Invasive Surgery Division and Fellowship, and Director of the Endometriosis Center at the University of Michigan. More recently, he was Director of the Center for Specialized Gynecology and Director of the Education Institute at the Nicholson Center, an advanced medical and surgical simulation training facility at Florida Health. He is currently Vice President of the American Association of Gynecologic Laparoscopy and a Member-at-Large for the Society of Gynecologic Surgeons. He is a leader in minimally invasive surgical techniques and one of the world's most experienced gynecologic robotic surgeons, who has published and taught extensively in the area of minimally invasive surgery, as well as developed surgical instruments that are in use worldwide.

Julianne Bingener, M.D.

Dr. Juliane Bingener is Professor of Surgery, Mayo Clinic College of Medicine, and Vice Chair for Quality, Safety and Service in the Mayo Clinic Department of Surgery. She has a joint appointment in the Division of Gastroenterology and Hepatology, which supports her clinical interests in minimally invasive surgery, endoscopy, and gastrointestinal disease. Her research focuses on patient reported outcomes and novel technology in the diagnosis and treatment of these diseases. Dr. Bingener's previous work included the development of a Natural Orifice Transluminal Endoscopic Surgery (NOTES) technique for using an omental patch to close perforated ulcers. Her ongoing interests focus on the development, study, and implementation of innovative endoscopic and laparoscopic approaches for gastrointestinal diseases.

W. Douglas Boyd, M.D.

Dr. Boyd is a Professor of Surgery and Director of Robotics and Biosurgery at the University of California Davis. He is Head of Adult Cardiac Surgery and Surgical Director of the Transcatheter Valve Program. He is recognized for his pioneering work in cardiothoracic surgery and for his use of robotic-assisted surgical systems. He specializes in minimally invasive cardiac and robotic-assisted heart surgery. Dr. Boyd completed the world's first closed-chest, beating-heart coronary artery bypass surgery using a robotic system in 1999. Prior to his appointment as a professor of surgery at UC Davis Health System, Dr. Boyd served as chair of the Department of Cardiothoracic Surgery at the Cleveland Clinic in Florida. As the author of more than 70 peer-reviewed journal articles, Dr. Boyd's research interests include cardiac tissue regeneration using extracellular matrix/stem cells, new techniques for robot-assisted minimally invasive coronary artery revascularization, valve surgery and tele-surgery. He is a graduate of Carleton University in Ottawa, Canada and obtained his medical degree from the University of Ottawa, Canada.

Demetrius EM Litwin, M.D.

Dr. Demetrius Litwin serves as Chair of Surgery at University of Massachusetts Medical School at Worcester, MA and University of Massachusetts Memorial Medical Center. Dr. Litwin trained in General Surgery at the University of Saskatchewan, and completed a hepatobiliary fellowship at the University of Toronto. He was a leader in educating a large number of surgeons across Canada in basic and advanced laparoscopic techniques. In 1993, Dr. Litwin became the Director of Minimally Invasive Surgery at the University of Toronto. In 1997, he moved to the University of Massachusetts as Chief of Minimally Invasive Surgery. Since 2004, he has been Chairman of Surgery at the University of Massachusetts Medical School and University of Massachusetts Memorial Medical Center, one of the largest Academic Health Sciences Centers in Massachusetts.

Vipul Patel, M.D. FACS

Dr. Patel is the medical director of the Global Robotics Institute at Florida Hospital Celebration Health and Medical Director of the Florida Hospital Cancer Institute Urologic Oncology Program. He is the founder of the International Prostate Cancer Foundation (IPCF) and a founding member and now president of the Society of Robotic Surgery. He serves as an honorary professor at the University of Milan, Korea University and Ricardo Palma University in Lima, Peru, and was recently made an honorary professor of the Russian Academy of Science. He is one of the most experienced robotic surgeons in the world and has personally performed over 10,000 robotic prostatectomies. Dr. Patel previously served as director of the Robotic Surgery Program at The Ohio State University in Columbus, Ohio, prior to joining Florida Hospital Celebration Health in 2008. Dr. Patel is board certified by the American Urological Association and completed his residency and fellowship training at the University of Miami in Florida.

Lee L. Swanstrom, M.D.

Dr. Swanstrom heads the Division of GI and Minimally Invasive Surgery at the Oregon Clinic and is Director of Providence Health System's Complex GI and Foregut Surgery Postgraduate Fellowship Program. In addition, he is Clinical Professor in the Department of Surgery at Oregon Health & Science University (OHSU), a Director of the American Board of Surgery, and Past President of both the Society of American Gastrointestinal Endoscopic Surgeons (SAGES) and the Fellowship Council (FC). Most recently, he became the Chief Innovations Officer and Director of the Innovations Fellowship at the Institutes des Hôpitals Universitaires of the University of Strasbourg, France. He is the editor of Surgical Innovation and the author of over 300 scientific papers and 50 book chapters. This has resulted in 13 patents and a successful medical device startup company. He is and has been an investigator on numerous outcomes research studies for new procedures such as Natural Orifice Translumenal Endoscopic Surgery (NOTES) to determine their safety and efficacy for establishing new standards of care. He remains focused on developing innovative approaches to the minimally invasive treatment of foregut and other gastrointestinal disorders.

John Valvo, M.D.

Dr. Valvo, a practicing surgeon, is the Executive Director of Robotic and Minimally Invasive Surgery at Rochester General Hospital in Rochester, New York, where he formerly was the Chief of Urology. Following a 20-year career performing open surgery, Dr. Valvo founded the robotic surgery program at Rochester General Hospital in early 2004, which currently ranks in the top two percent of robotic surgery volume in the United States. The program has trained over 30 robotic surgeons and enabled the completion of more than 7,000 robotic urology, gynecology, general and colorectal surgeries. Dr. Valvo has authored more than 100 scientific articles and helped start many robotic programs in the northeast. His focus on robotic surgery credentialing led to a notable published paper on policy guidelines for robotic surgery. He is a fellow of the American College of Surgeons and American Urological Association, and a member of the Society for Laparoscopic Surgeons.

RISK FACTORS

Investing in the Company's securities involves a high degree of risk. Before making an investment decision with respect to the Company's securities, potential investors should carefully consider the following risk factors, in addition to the other information included or incorporated by reference into this annual information form, as well as the Company's historical financial statements and related notes. The risks set out below are not the only risks that the Company faces, however management has identified the risks below as specific risks to the Company. If any of the following risks materialize, the Company's business, financial condition, prospects or results of operations will likely suffer. In that case, the trading price of the Company's Common Shares and Warrants could decline and an investor may lose all or part of the money paid to buy the Company's securities.

The Business of the Company – General

Additional Financing and Going Concern

The Company will require additional financing in order to continue its research and development program through to completion and take advantage of future opportunities. The ability of the Company to arrange such financing in the future will depend in part upon prevailing capital market conditions, as well as upon the business success of the Company. There can be no assurance that the Company will be successful in its efforts to arrange additional financing on terms satisfactory to the Company. If additional financing is raised by the issuance of shares or convertible securities from treasury, control of the Company may change and shareholders may suffer additional dilution. If additional funds are raised through strategic partnerships, the Company may be required to relinquish rights to its products, or to grant licences on terms that are not favorable to the Company. If adequate funds are not available, or are not available on acceptable terms, the Company may not be able to take advantage of opportunities, or otherwise respond to competitive pressures, which may delay or reduce the Company's operations and ability to remain business and continue as a going concern.

History of Losses

The Company has a history of losses, and there is no assurance that any of its contemplated products will generate sustainable earnings, be profitable or provide a return on investment in the future. The Company has not paid dividends in the past. Its directors will determine the future dividend policy of the Company if the Company generates earnings in the future, based on operational circumstances at that time. The Company had negative cash flow from operating activities for its fiscal year ended December 31, 2016 and this negative cash flow is expected to continue.

Strategic Alliances

The Company relies upon, and expects to rely upon, strategic alliances with original equipment manufacturers (if and when the Company's technology is commercialized) and medical technology development firms for development contracts, assistance in product design and development, volume purchase orders and manufacturing and marketing expertise. There can be no assurance that the strategic alliances will achieve their goals.

Dependence on Key Personnel

The Company's future success and growth depends in part upon the experience of key members of management. If, for any reason, any one or more of such key personnel do not continue to be active in the Company's management, the operations and business prospects of the Company could be adversely affected. In particular, the losses of the services of any of the Company's senior management or other key employees integral to the development of its technology and the generation of a functional, commercially viable product, or the inability to attract and retain necessary technical personnel in the future, could have a short term material adverse effect upon the Company's business, financial condition, prospects, operating results and cash flows. The Company does not currently maintain "key man" insurance for any senior management or other key personnel.

Ability to Attract Qualified Employees to Maintain and Grow Business

The Company expects that its potential expansion into areas and activities requiring additional expertise, such as further pre-clinical studies, regulatory and governmental approvals, manufacturing, sales, marketing and distribution will place additional requirements on its management, operational and financial resources. The Company expects these demands will require an increase in management and scientific and technical personnel and the development of additional expertise by existing management personnel. There is currently aggressive competition for employees who have experience in technology and engineering. The failure to attract and retain such personnel or to develop such expertise could materially adversely affect the Company's business, financial condition and results of operations.

Breach and Loss of Trade Secret Rights and Other Proprietary Information

The Company relies on trade secrets and confidential information, which it seeks to protect, in part, through confidentiality and non-disclosure agreements with its employees, collaborators, suppliers, and other parties. There can be no assurance that these agreements will not be breached, that the Company would have adequate remedies for any such breach or that its trade secrets and confidential information will not otherwise become known to or independently developed by competitors. The Company might be involved from time to time in litigation to determine the enforceability, scope and validity of its proprietary rights. Any such litigation could result in substantial cost and divert management's attention from operations.

Dependence on Third Parties

The Company is dependent on third parties to conduct its pre-clinical studies and to provide services for certain important aspects of its business. If these third parties do not perform as contractually required or expected, the Company may not be able to obtain regulatory approval for its products, or may be delayed in doing so.

The Company relies on third parties, such as technology design and development firms, contract research organizations, medical institutions, academic institutions, independent clinical investigators and contract laboratories, to conduct technology development, pre-clinical studies, and it expects to continue to do so in the future. The Company relies heavily on these parties for successful execution of technology development and pre-clinical studies, but does not control many aspects of their activities. As a result, many important aspects of product development are outside the direct control of the Company. If the third parties conducting pre-clinical studies do not perform their contractual duties or obligations, do not meet expected recruitment or other deadlines, fail to comply with good laboratory practice regulations, do not adhere to protocols or otherwise fail to generate reliable pre-clinical data, development, approval and commercialization of the Company's products may be extended, delayed or terminated or may need to be repeated, and the Company may not be able to obtain regulatory approval.

Competition

The robotic surgical market for the Company's products is highly competitive with respect to, among other factors: pricing, product and service quality, and the time required to introduce new products and services. New products may be slow to be accepted into the market or may not be accepted at all. The Company is constantly exposed to the risk that its competitors may implement new technology before the Company does, or may offer lower prices, additional products or services or other incentives that the Company cannot and will not offer. The Company can give no assurances that it will be able to compete successfully against existing or future competitors. Competition in the Company's markets is intense, and the Company expects competition to increase. The market for robotic surgery technologies is susceptible to price reductions among competitors seeking relationships with large and well capitalized businesses.

The Company's ability to compete successfully depends on a number of factors, including:

- the successful identification and development of new products for the Company's core market;
- the Company's ability to anticipate customer and market requirements and changes in technology and industry standards in a timely manner;
- the Company's ability to gain access to and use technologies in a cost-effective manner;
- the Company's ability to introduce cost-effective new products in a timely manner;
- the Company's ability to differentiate its products from its competitors' offerings;
- the Company's ability to gain customer acceptance of its products;
- the performance of the Company's products relative to its competitors' products;

- the Company's ability to market and sell the Company's products through effective sales channels;
- the Company's ability to establish and maintain effective internal financial and accounting controls and procedures;
- the Company's ability to obtain required regulatory clearances and approvals in a timely manner;
- the protection of the Company's intellectual property, including its processes, trade secrets and know-how; and
- the Company's ability to attract and retain qualified technical, executive and sales personnel.

Infringement of Intellectual Property Rights

The Company's commercial success depends, in part, upon the Company not infringing intellectual property rights of others. A number of medical device and robotic surgery companies and other third parties have been issued patents and other proprietary rights, may have filed applications for patents and other proprietary rights, and may obtain additional patents and other proprietary rights, for technologies similar or identical to those being developed or utilized by the Company. Accordingly, there may currently exist third party patents, patent applications or other proprietary rights that may require the Company to alter its technology or proposed products, obtain licenses, or cease certain activities. The Company may become subject to claims by third parties that the Company's technology or products infringes the third parties' intellectual property rights for any reason, including due to the growth of products in target markets, the overlap in functionality of those products and the prevalence of products. The Company may become subject to these claims either directly by the third parties, or through indemnities against these claims that it may provide to end-users, manufacturer's representatives, distributors, value added resellers, system integrators and original equipment manufacturers.

Litigation before the courts of jurisdictions, or proceedings before patent offices, may be necessary to determine the scope, enforceability and validity of third party proprietary rights and the Company's proprietary rights. Some of the Company's competitors have, or are affiliated with companies having, substantially greater resources than the Company and these competitors may be able to sustain the costs of complex intellectual property litigation and proceedings to a greater degree and for a longer period of time than the Company. Regardless of their merit, any claims relating to intellectual property scope, enforceability, validity, or infringement could be time consuming to evaluate and defend, result in costly litigation, cause product shipment delays or stoppages, divert management's attention and focus away from the business, subject the Company to significant liabilities and equitable remedies, including injunctions, require the Company to enter into costly royalty or licensing agreements and/or require the Company to modify or stop developing or commercializing certain technologies and products unless it obtains a license from a third party. There can be no assurance that the Company would be able to obtain any such license on commercially favourable terms or at all. If it does not obtain such a license, it could be required to cease the development and sale of certain of its products.

Intellectual Property

There is no guarantee that the patent applications owned by the Company will be granted, or, even if allowed to grant, that the patent applications will be granted in their current form or granted with a scope of protection sufficient to protect the Company's commercially valuable technology. The scope of protection, if any, that may be afforded by the patent applications of the Company is uncertain. Further, even if patents issue from the Company's pending or future applications, those issued patents and any previously assigned patents of the Company may be invalid or have a narrower scope of protection, and may be subject to invalidation proceedings commenced by third parties. The validity of an issued patent may be attacked on a number of different grounds, and such invalidation proceedings are inherently unpredictable. If such an invalidation proceeding commenced by a third party in respect of an issued patent owned by the Company is successful, the subject patent will be ordered invalid and therefore unenforceable.

The success of the Company will depend, in part, on its ability to obtain and maintain protection over its technology and products and not infringe the proprietary rights of third parties. Despite precautions, it may be possible for a third party to copy or otherwise obtain and use the Company's technology without authorization. There can be no assurance that any steps taken by the Company will prevent misappropriation of its technology. Litigation could result in substantial costs and diversion of resources and could have a material adverse effect on Company's business, operating results and/or financial condition.

Current Global Financial Conditions

Current global financial markets have been subject to increased volatility. Access to financing has been negatively impacted in Canada, the United States and elsewhere. As such, the Company is subject to counter-party risk and liquidity risk. The Company is exposed to various counter-party risks including, but not limited to: (i) risks relating to financial institutions that hold the Company's cash; (ii) risks relating to companies that have payables to the Company or to whom the Company has made prepaid expenditures; and (iii) risks relating to the Company's insurance providers.

The current state of the global financial markets may negatively impact the ability of the Company to obtain loans and other credit facilities in the future and, if obtained, on terms favourable to the Company. If levels of volatility are increased or there is market turmoil, the Company's planned growth could be adversely impacted and the trading price of the Company's securities could be adversely affected.

Customers may reduce or postpone expenditures in view of the uncertainty of the global credit and financial markets and the limitations on available credit. Additional impacts of prevailing global financial conditions may include the inability of key suppliers or distribution partners of the Company to remain solvent and/or to obtain sufficient financing for the development and manufacture of its prototypes and products (at the appropriate stages of development), and sales of its products.

Trademarks

The Company does not own or license any trademark registrations for the marks and names that it is currently using in connection with products under development, or for the company's name, in any jurisdiction including the proposed principal markets where the Company plans to market and sell the SPORT Surgical System following regulatory clearance and commercialization of its surgical system. The Company may be unable to obtain or maintain trademark registrations for the marks and names it uses in one or more countries. It is possible that the use of "SPORT", "SPORT Surgical System", "Titan", "Titan Medical" or variations thereof may infringe or contravene the rights, including trademark rights, of other parties in one or more countries. In the event of actual or alleged infringement or contravention of rights, the Company may be forced to cease using these marks and names. There may be a substantial risk of litigation or other legal proceedings in one or more countries relating to the alleged infringement or contravention of another party's trademark rights. These proceedings may occur even if the Company ceases using these marks and names. The Company may incur substantial costs to defend and/or enforce its rights, if any, in these marks and names in such legal proceedings. The Company may not be successful in such legal proceedings, and may be required or agree to cease using these marks and names and pay other parties significant amounts of money. The Company may incur substantial costs to change the names and marks used by it, including the names and marks used in association with its products. In any such events, the business and operations of the Company could be materially adversely affected.

Recent Changes in Senior Management of the Company

The future success of the Company will depend in part on the ability of the Company and its senior management team to manage the transition following recent leadership changes and avoid or minimize disruption to the operations of the Company.

Conflicts of Interest

Certain directors, officers and advisors of the Company are also directors, officers, advisors or shareholders of other companies. Such associations may give rise to conflicts of interest from time to time. The directors of the Company will be required by law to act honestly and in good faith with a view to the best interests of the Company and to disclose any interest which they may have in any project or opportunity of the Company. If a conflict arises at a meeting of the board of directors, any director with a conflict will disclose their interest and abstain from voting on such matter. In determining whether or not the Company will participate in any project or opportunity, the board will consider merit of the opportunity and the degree of risk to which the Company may be exposed, along with its financial position at that time.

Results of Operations

The results of operations of the Company will depend upon numerous factors, including:

- the successful development and commercialization of the SPORT Surgical System in a timely manner and in accordance with budgeted expenditures;
- the extent to which the Company's products gain market acceptance;
- actions relating to regulatory matters;
- timing and ability to develop manufacturing and sales and marketing capabilities;
- demand for products;
- the progress of surgical training in the use of products;
- ability to develop, introduce and market new or enhanced versions of the Company's products on a timely basis;
- product quality problems;
- ability to protect proprietary rights and defend against third party challenges; and
- ability to license additional intellectual property rights as required.

Rapidly Changing Markets Make it Difficult to Forecast Future Operating Results

The Company operates in markets characterized by technological change. The Company will likely be required to reposition its product and service offerings in the future and introduce new products and services as the Company encounters rapidly changing requirements from its customers and increasing competitive pressures. The Company may not be successful in doing so in a timely and responsive manner, or at all. As a result it is difficult to forecast future revenues and plan operating expenses appropriately, which also makes it difficult to predict future operating results.

Uncertain Market/Uncertain Acceptance of the Company's Technology/Target Market

The market for the Company's proposed technology is relatively new and is likely to undergo substantial development and changes. The market for the Company's technology may develop more slowly than the Company anticipates, in which case the Company may be unable to recover the losses it has incurred in the development of its technology and may never achieve profitability. The Company cannot guarantee that this market will develop as anticipated or that the Company will achieve a market share necessary to achieve profitability and growth.

There is no assurance that physicians and surgeons will choose the Company's products (once they are commercialized) over the products offered by its competitors. There is also no assurance that robotic surgical systems will continue to be used (or their use increased) by potential customers and that robotic surgical technology will be competitive (based on costs and performance factors) with, and preferred over, conventional and well established medical treatment and surgical methods including conventional minimally invasive surgery and open surgery.

Technological Advancements

The existing competitors could advance their products and new competitors could enter the market with superior technology. New and competitive products introduced into the marketplace that are based on or incorporate more advanced technologies may already impact the Company's operating and financial results.

Insurance and Uninsured Risks

The Company's business is subject to a number of risks and hazards including adverse conditions or changes in the regulatory environment. Such occurrences could result in damage to equipment, personal injury or death, monetary losses and possible legal liability. Despite any insurance coverage which the Company currently has or may secure in the future, the nature of these risks is such that liabilities might exceed policy limits, the liabilities and hazards might not be insurable, or the Company may elect not to insure against such liabilities due to high premium costs or other reasons, in which event the Company could incur significant costs that could have a materially adverse effect upon its financial position.

Ability to License Other Intellectual Property Rights

The technology of the Company may require the use of other existing technologies and processes which are currently, or in the future will be, subject to patents, copyrights, trademarks, trade secrets and/or other intellectual property rights held by other parties. The Company may need to obtain one or more licenses to use those other existing technologies. If the Company is unable to obtain licenses, on reasonable commercial terms, from the holders of such intellectual property rights, the Company could be required to halt development and manufacturing or redesign its technology, failing which it could bear a substantial risk of litigation for infringement or misappropriation of such intellectual property rights. In any such event, the business and operations of the Company could be materially adversely affected.

Government Regulation

The pre-clinical testing, manufacturing, sale and distribution of the Company's contemplated product requires approvals from Canadian Health Protection Branch, clearance to market from the FDA and European CE Mark approval. Applications for these approvals and clearance have not been made and there can be no assurances that such approvals will be received or if such approvals and clearance are granted, that the Company will be able to comply with the conditions and requirements of such approvals and clearance. Failure to obtain such approvals and clearance or to comply with such conditions and requirements may have a material adverse effect on the Company's business, financial condition and results of operation.

Regulatory requirements and standards for approval of medical devices are subject to change and the adaptation of the Company's technology development program to meet the changing requirements and standards may cause the Company to incur substantial expenditures and may result in substantial delays in the achievement of and changes to the technology development milestones as well as escalations in the corresponding budgets. Such changes may require unanticipated human clinical trials which could add significant expense and substantially lengthen timelines to commercialization. These changes may have an adverse effect on the Company's ability to commercialize its products and its results of operations and financial condition.

Profitability

There is no assurance that the Company will earn profits in the future, or that profitability will be sustained. The medical device industry requires significant financial resources, and there is no assurance that future revenues will be sufficient to generate the funds required to continue the Company's business development and marketing activities. If the Company does not have sufficient capital to fund its operations, it may be required to reduce its research and development efforts or in the future reduce its marketing efforts or forego certain business opportunities.

Changes in Government Policy

The Company's results may be affected by changes in trade, monetary and fiscal policies, laws and regulations, or other activities of the Canadian, United States and foreign governments, agencies and similar organizations. The Company's results may be affected by social and economic conditions which impact the Company's operations.

Changes in Accounting and Tax Rules

The Company is subject to numerous tax and accounting requirements, and changes in existing accounting or taxation rules or practices, or varying interpretations of current rules or practices, could have a significant adverse effect on the financial results of the Company or the manner in which the Company conducts its business. The Company has issued its financial statements for the year ended December 31, 2016 in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

In the future, the geographic scope of the Company's business may expand, and such expansion will require it to comply with the tax laws and regulations of multiple jurisdictions. Requirements as to taxation vary substantially among jurisdictions. Complying with the tax laws of these jurisdictions can be time consuming and expensive and could potentially subject the Company to penalties and fees in the future if it were to inadvertently fail to comply. In the event the Company were to inadvertently fail to comply with applicable tax laws, this could have a material adverse effect on the business, results of operations, and financial condition of the Company.

Contingent Liabilities

Contingent liabilities for contractual and other claims with customers, development firms, suppliers and former employees to which the Company may become party to in the future may have a material adverse effect on its financial position. Please also see the discussion regarding a contingent liability to Longtai Medical Inc. under "Development of the Business – Three Year History – 2016 and 2015".

The Business of the Company – Research and Development Operations

Uncertainty as to Product Development and Commercialization Milestones

The Company has established product development and commercialization milestones that it uses to assess its progress toward developing a commercially viable product. These milestones relate to technology and design improvements as well as to dates for achieving development goals and projected expenditures. To assess progress, the Company tests and evaluates its technology under simulated conditions. If such evaluations indicate technical defects or failure to meet cost or performance goals, the Company's commercialization schedule could be delayed and potential purchasers of its initial commercial systems may decline to purchase them or they may choose to purchase alternative technologies. Whether or not the Company meets its milestones, there is no assurance that the Company's technology will be successful in the market. The Company expects that additional specific milestones could be identified as the development of its SPORT Surgical System progresses, or existing milestones, budgets and the schedule for completion of each milestone may change depending on a number of factors including the results of the Company's development program, the availability of financing and the ability of development firms engaged by the Company to completed work assigned to them.

Product and Services Not Completely Developed

The future success of the Company is substantially dependent on a continued research and development effort thus far directed by certain of its key managers. In addition to being capital intensive, research and development activities relating to sophisticated technologies, such as those of the Company, are inherently uncertain as to future success and the achievement of a desired result. If delays or problems occur during the Company's ongoing research and development process, important financial and human resources may need to be diverted toward resolving such delays or problems. Further, there is a material risk that the Company's research and development activities may not result in a functional, commercially viable product or one that is approved by regulatory authorities.

Manufacturing Risks

The manufacture of prototypes and products, once commercialized, will involve complex processes and the manufacturers engaged by the Company may encounter difficulties initiating and maintaining production. In the future, there could be a significant disruption in the supply of materials or products from current sources or, in the event of a disruption, the Company might not be able to locate alternative suppliers of materials, components or products of comparable quality at an acceptable price, or at all. In addition, the Company cannot be certain that its manufacturers will be able to complete the production of the prototypes or to fill its orders for its products, once commercialized, in a timely manner. If the Company experiences significant increased demand, or needs to replace an existing manufacturer, there can be no assurance that additional supplies of product or additional manufacturing capacity will be available when required on terms that are acceptable to the Company, or at all. In addition, even if the Company is able to expand existing manufacturing or find new manufacturing, the Company may encounter delays in production. Any delays, interruption or increased costs in the supply of materials or manufacture of the Company's products could have an adverse effect on the Company's ability to meet customer demand for its products and result in lower revenues and net income.

Reliance on External Suppliers and Development Firms

The Company is dependent on external suppliers and development firms to conduct its technology research and development and manufacturing of evaluation units of the SPORT Surgical System. If these external firms seek to impose conditions on their obligations to conduct their work in addition to or different from the terms set forth in their engagement agreements and the Company is unable to satisfy those conditions or they do not otherwise perform as contractually required or expected, the Company may not be able to complete the development of the SPORT Surgical System, or the Company may be delayed in doing so, and the costs for developing its products may significantly increase beyond those forecasted. In the event that external development firms do not resume, or they do not otherwise carry on, the development work on the SPORT Surgical System on conditions and in a manner that is agreeable to the Company, it may engage other firms to take on the development work and in that case, the estimated costs of the development milestones set forth in this prospectus supplement may increase and the schedule for completion of each milestone may be delayed.

The Company relies heavily on external parties for successful execution of the SPORT Surgical System development program, but does not control many aspects of their activities. As a result, many important aspects (including costs and timing) of product development are outside the direct control of the Company.

The Company is responsible for ensuring that the SPORT Surgical System is being developed to meet the guidelines and requirements of the FDA and other regulatory authorities, applicable laws and regulations and industry standards. The Company's reliance on third parties does not relieve it of these responsibilities.

Additionally, if the external firms conducting pre-clinical studies do not perform their contractual duties or obligations, do not meet expected deadlines, fail to comply with good laboratory practice regulations, do not adhere to the Company's study protocols or otherwise fail to generate reliable clinical data, development, approval and commercialization of its products, may be extended, delayed or terminated or may need to be repeated, costs may significantly increase and the Company may not be able to obtain regulatory approval within the time frames forecasted, if at all.

Product Defect Risk

A malfunction or the inadequate design of the Company's contemplated products could result in product liability or other tort claims. Accidents involving the Company's products could lead to personal injury, death or physical damage. Any liability for damages resulting from malfunctions could be substantial and could adversely affect the Company's business and results of operations. In addition, a well-publicized actual or perceived problem could adversely affect the market's perception of the Company's products. This could result in a decline in demand for the Company's products, which would adversely affect its financial condition and results of operations.

If any of the Company's contemplated products prove defective, the Company may be required to redesign or recall such products. This redesign or recall may cause the Company to incur significant expenses, disrupt sales and adversely affect the reputation for the Company and its products, which could adversely impact its revenue, operating results and profitability.

Supplier

The Company is substantially dependent on a small number of external development and manufacturing firms for its technology and products. Key suppliers and development firms could go out of business, be purchased by competitors or infringe on another company's intellectual property and may consequently be unable to continue to supply the Company. In these circumstances, the Company may be unable to find alternative suppliers in a timely manner and the resulting delay may have an adverse effect on the Company's operating results and financial condition.

Securities of the Company

Stock Price Volatility

The Common Shares and certain Warrants of the Company trade in Canada on the Toronto Stock Exchange and the Common Shares also trade in the United States on the OTCQX. The Company cannot predict the extent to which investor interest will lead to the development of an active and liquid trading market in its Common Shares and Warrants and it is possible that an active and liquid trading market will not develop or be sustained. Some companies that have volatile market prices for their securities have had securities class action lawsuits filed against them. If a lawsuit were to be commenced against the Company, regardless of its outcome, it could result in substantial costs and a diversion of management's attention and resources. The price of Common Shares and Warrants may fluctuate in response to a number of events, including but not limited to:

- its quarterly operating results;
- sales of the Company's Common Shares by a principal shareholder;
- future announcements concerning the business of the Company or of its competitors;
- the failure of securities analysts to cover the Company and/or changes in financial forecasts and recommendations by securities analysts;
- actions of the Company's competitors;
- actions of the Company's suppliers;
- actions of any medical technology development firms engaged by the Company;
- actions of directors and officers regarding purchases and sales of shares;
- general market, economic and political conditions;

- natural disasters, terrorist attacks and acts of war; and
- the other risks described in this section.

Future Share Sales

Additional equity financings or other share issuances by the Company could adversely affect the market price of the Company's shares. Sales by existing shareholders of a large number of shares of the Company's shares in the public market and the sale of shares issued in connection with acquisitions or strategic alliances, or the perception that such additional sales could occur, could cause the market price of the Company's shares to drop.

Limited Operating History

The Company is a robotic surgery technology development company with a limited operating history. Future operating results may be difficult to predict. The Company is in the development stage and has been engaged in research and product development since its inception. There are many regulatory steps that must be completed as part of the development program before the Company's technology can be commercialized and a product is available for the market. These regulatory steps are costly and uncertain. The future success of the Company's business will depend on the ability to design and obtain regulatory approvals and clearances for new products, manufacture and assemble current and future products in sufficient quantities in accordance with applicable regulatory requirements and at lower costs, which the Company may be unable to do. There is a limited history of operations upon which to evaluate the Company's business and its prospects. Operating expenses have increased since inception due to the development program. The lack of a significant operating history may limit an investor's ability to make a comparative evaluation of the Company, its products and its prospects. The Company has not generated revenue since its inception.

Fluctuating Financial Results

The Company's financial results may vary significantly from period to period. The financial results may fluctuate as a result of a number of factors that may be outside of the Company's control, which may cause the market price of the Common Shares to fall. For these reasons, comparing the Company's operating results on a period-to-period basis may not be meaningful, and an investor should not rely on past results as an indication of future performance. Financial results may be negatively affected by any of the risk factors listed in this "Risk Factors" section.

Effect of Estimates Regarding Milestones

For planning purposes, the Company estimates and may disclose timing of a variety of clinical, regulatory and other milestones. The Company bases its estimates on present facts and a variety of assumptions. Many underlying assumptions are outside the control of the Company such as the ability to perform pre-clinical studies, obtain access to pre-clinical evaluation sites as expected or obtain approvals or clearance from regulatory bodies such as the FDA. If the Company does not achieve milestones consistent with investors' expectations, the price of its Common Shares and Warrants would likely decline.

Currency Fluctuations

The Company's operating results are subject to fluctuations in foreign currency exchange rates.

DIVIDENDS

The Company has not declared or paid dividends in the past. The Company presently intends to retain future earnings, if any, to finance the expansion and growth of its business. Any future determination to pay dividends will be at the discretion of the Company's board of directors and will depend on the Company's financial conditions, results of operations, capital requirements and other factors the board of directors deems relevant. The Company had negative cash flow from operating activities for its fiscal year ended December 31, 2016 and the negative cash flow is expected to continue.

There are no other restrictions on the Company's ability to pay dividends. However, the *Business Corporations Act* (Ontario) does not permit a corporation to pay dividends if the corporation is, or would after the payment, be unable to pay its liabilities as they become due or the realizable value of the corporation's assets would thereby be less than the aggregate of its liabilities and stated capital of all classes. In addition, the terms of any future debt or credit facility may preclude the Company from paying dividends.

CAPITAL STRUCTURE

The authorized capital of the Company consists of an unlimited number of Common Shares of which 166,511,446 were issued and outstanding as at December 31, 2016. The holders of Common Shares are entitled to receive notice of and to attend all annual and special meetings of the Company's shareholders and to one vote in respect of each Common Share held at the record date for each such meeting. The holders of Common Shares are entitled, at the discretion of the Board of Directors, to receive out of any or all of the Company's profits or surplus properly available for the payment of dividends, any dividend declared by the Board of Directors and payable by the Company on the Common Shares. The holders of the Common Shares will participate rateably in any distribution of the assets of the Company upon liquidation, dissolution or winding-up or other distribution of the assets of the Company. Such participation will be subject to the rights, privileges, restrictions and conditions attached to any of the Company's securities issued and outstanding at such time ranking in priority to the Common Shares upon the liquidation, dissolution or winding-up of the Company. Common Shares are issued only as fully paid and are non-assessable.

The Company also had outstanding as at December 31, 2016 an aggregate of 83,102,520 Warrants that were issued in connection with prior offerings. These Warrants include:

| Ticker Symbol | Issue Date | Expiry Date | Number Issued | Number Outstanding | Exercise Price (CDN \$) | Potential Proceeds of exercise of Warrants |
|----------------------|-------------------|--------------------|----------------------|---------------------------|--------------------------------|---|
| NOT LISTED | March 14, 2012 | March 14, 2017 | 1,986,755 | 390,729 | \$1.77 | 691,590 |
| TMD.WT.C | March 13, 2013 | March 13, 2018 | 6,260,763 | 5,260,705 | \$1.25 | 6,575,881 |
| TMD.WT.D | February 19, 2014 | February 19, 2017 | 9,142,500 | 8,317,856 | \$2.00 | 16,635,712 |
| TMD.WT.E | April 23, 2014 | April 23, 2017 | 12,203,189 | 12,346,914 | \$2.75 | 33,954,014 |
| TMD.WT.F. | November 16, 2015 | November 16, 2020 | 7,012,195 | 7,012,195 | \$1.60 | 11,219,512 |
| TMD.WT.G | February 12, 2016 | February 12, 2021 | 11,670,818 | 11,600,818 | \$1.00 | 11,600,818 |
| | February 23, 2016 | February 23, 2021 | 1,746,789 | 1,746,789 | \$1.00 | 1,746,789 |
| TMD.WT.H | March 31, 2016 | March 31, 2021 | 15,054,940 | 15,054,940 | \$1.20 | 18,065,928 |
| | April 14, 2016 | April 14, 2021 | 2,258,241 | 2,258,241 | \$1.20 | 2,709,889 |

| | | | | | | |
|----------|--------------------|--------------------|------------|------------|--------|-------------|
| TMD.WT.I | September 20, 2016 | September 20, 2021 | 17,083,333 | 17,083,333 | \$0.75 | 12,812,500 |
| | October 27, 2016 | October 27, 2021 | 2,030,000 | 2,030,000 | \$0.75 | 1,522,500 |
| TOTAL | | | 86,449,523 | 83,102,520 | | 117,535,133 |

Notes:

1. Assumes that Warrants are exercised in full. There is no assurance any Warrants will be exercised.

All of the Warrants referenced in the table above are governed by warrant indentures (the “Warrant Indentures”) entered into between the Company and Computershare Limited (or its predecessor, Olympia Transfer Services Inc.), as warrant agent thereunder, and/or warrant certificates, as the case may be, dated the date of issue of each series of warrants. A copy of each Warrant Indenture can be found on SEDAR at www.sedar.com.

The Company also has outstanding stock options (“Options”) granted to directors, officers and employees of the Company. At December 31, 2016, there were 7,202,250 Options outstanding. Each Option entitles its holder to purchase one Common Share of the Company at an exercise price determined by the board of directors. The terms of each Option including the number of Options granted, the exercise price, the expiry date and any vesting provisions were determined by the Company’s board of directors at the time of the grant of each Option. Please see the Company’s notes to the annual audited financial statements for the 2016 fiscal year, which provides more detailed disclosure on the Options outstanding and the terms thereof.

MARKET FOR SECURITIES

All references to currency in this section under the heading, “*Market for Securities*” is in Canadian dollars.

Summary of Monthly Trading – Common Shares

The Company’s Common Shares are listed for trading in Canada on the TSX under the symbol “TMD”. The Common Shares of the Company also began trading on the international tier of the OTCQX market in the United States under the ticker symbol “TITXF” as of February 24, 2012.

The following table shows the close, high and low trading prices and the volume of shares traded for the Common Shares of the Company on the TSX for each month in 2016.

| Month (2016) | High | Low | Close | Volume |
|--------------|--------|---------|--------|------------|
| December | \$0.45 | \$0.31 | \$0.32 | 3,506,265 |
| November | \$0.53 | \$0.385 | \$0.41 | 2,787,345 |
| October | \$0.55 | \$0.355 | \$0.51 | 8,390,162 |
| September | \$0.71 | \$0.345 | \$0.36 | 9,345,223 |
| August | \$0.89 | \$0.49 | \$0.66 | 4,360,204 |
| July | \$0.90 | \$0.78 | \$0.85 | 1,425,302 |
| June | \$0.88 | \$0.75 | \$0.87 | 2,041,214 |
| May | \$0.92 | \$0.74 | \$0.78 | 4,180,293 |
| April | \$0.95 | \$0.85 | \$0.89 | 4,813,720 |
| March | \$1.43 | \$0.77 | \$0.85 | 13,825,027 |
| February | \$1.83 | \$0.73 | \$0.80 | 10,585,685 |
| January | \$1.35 | \$1.00 | \$1.30 | 1,429,463 |

Summary of Monthly Trading – June 2016 Warrants

The Company's June 2016 Warrants were listed for trading on the TSX as of August 11, 2011 under the symbol "TMD.WT.A". The following table shows the close, high and low trading prices and the volume of warrants traded for the June 2016 Warrants of the Company on the TSX for each month in 2016 prior to their expiry on June 21, 2016.

| | High | Low | Close | Volume |
|------------------|---------|---------|---------|-----------|
| December | - | - | - | - |
| November | - | - | - | - |
| October | - | - | - | - |
| September | - | - | - | - |
| August | - | - | - | - |
| July | - | - | - | - |
| June 1-21 | \$0.005 | \$0.005 | \$0.005 | 1,064,635 |
| May | \$0.015 | \$0.005 | \$0.015 | 554,800 |
| April | \$0.035 | \$0.01 | \$0.02 | 45,500 |
| March | \$0.05 | \$0.03 | \$0.03 | 16,300 |
| February | \$0.55 | \$0.04 | \$0.45 | 155,500 |
| January | \$0.06 | \$0.05 | \$0.05 | 36,500 |

Summary of Monthly Trading – December 2016 Warrants

The Company's December 2016 Warrants were listed for trading on the TSX as of January 2012 under the symbol "TMD.WT.B". The following table shows the close, high and low trading prices and the volume of warrants traded for the December 2016 Warrants of the Company on the TSX for each month in 2016 prior to their expiry on December 22, 2016.

| Month (2015) | High | Low | Close | Volume |
|-----------------------|---------|---------|---------|--------|
| December 1- 21 | \$0.005 | \$0.005 | \$0.005 | 10,000 |
| November | - | = | - | - |
| October | - | - | - | - |
| September | - | - | - | - |
| August | \$0.005 | \$0.005 | \$0.005 | 30,000 |
| July | \$0.02 | \$0.015 | \$0.02 | 74,295 |
| June | \$0.03 | \$0.025 | \$0.025 | 2,000 |
| May | \$0.03 | \$0.005 | \$0.03 | 36,900 |
| April | \$0.02 | \$0.01 | \$0.2 | 33,000 |
| March | \$0.10 | \$0.02 | \$0.03 | 36,000 |
| February | \$0.19 | \$0.19 | \$0.19 | 5,000 |
| January | - | - | \$0.08 | - |

Summary of Monthly Trading – March 2018 Warrants

The Company's March 2018 Warrants were listed for trading on the TSX as of March 25, 2013 under the symbol "TMD.WT.C". The following table shows the close, high and low trading prices and the volume of warrants traded for the March 2018 Warrants of the Company on the TSX for each month in 2016.

| Month (2016) | High | Low | Close | Volume |
|-----------------|--------|---------|--------|--------|
| December | \$0.04 | \$0.015 | \$0.04 | 63,000 |

| Month (2016) | High | Low | Close | Volume |
|--------------|---------|---------|---------|---------|
| November | \$0.015 | \$0.015 | \$0.015 | 1,000 |
| October | \$0.095 | \$0.095 | \$0.095 | 300 |
| September | \$0.095 | \$0.095 | \$0.095 | 1,350 |
| August | - | - | - | - |
| July | - | - | - | - |
| June | - | - | - | - |
| May | \$0.15 | \$0.10 | \$0.15 | 46,936 |
| April | \$0.16 | \$0.12 | \$0.12 | 110,600 |
| March | \$0.38 | \$0.12 | \$0.12 | 179,712 |
| February | \$0.41 | \$0.15 | \$0.20 | 152,000 |
| January | \$0.40 | \$0.25 | \$0.40 | 97,7000 |

Summary of Monthly Trading – February 2017 Warrants

The Company's February 2017 Warrants were listed for trading on the TSX-V as of March 28, 2014 and on the TSX as of September 30, 2014, under the symbol "TMD.WT.D". The following table shows the close, high and low trading prices and the volume of warrants traded for the February 2017 Warrants of the Company for each month in 2016.

| Month (2016) | High | Low | Close | Volume |
|--------------|---------|---------|---------|---------|
| December | \$0.005 | \$0.005 | \$0.005 | 100,000 |
| November | \$0.010 | \$0.005 | \$0.005 | 242,700 |
| October | - | - | \$0.005 | - |
| September | \$0.015 | \$0.005 | \$0.005 | 23,000 |
| August | \$0.01 | \$0.005 | \$0.01 | 148,000 |
| July | - | - | \$0.03 | 500 |
| June | \$0.03 | \$0.03 | \$0.03 | 1,000 |
| May | - | - | - | - |
| April | - | - | - | - |
| March | \$0.09 | \$0.09 | \$0.09 | 1,500 |
| February | - | - | \$0.07 | - |
| January | \$0.08 | \$0.06 | \$0.07 | 209,300 |

Summary of Monthly Trading – April 2017 Warrants

The Company's April 2017 Warrants were listed for trading on the TSX-V as of May 7, 2014 and on the TSX as of September 30, 2014, under the symbol "TMD.WT.E". The following table shows the close, high and low trading prices and the volume of warrants traded for the April 2017 Warrants of the Company for each month in 2016.

| Month (2016) | High | Low | Close | Volume |
|--------------|---------|---------|---------|---------|
| December | \$0.005 | \$0.005 | \$0.005 | 78,000 |
| November | - | - | - | - |
| October | - | - | - | - |
| September | \$0.005 | \$0.005 | \$0.005 | 5,000 |
| August | \$0.005 | \$0.005 | \$0.005 | 101,000 |
| July | - | - | - | - |
| June | \$0.015 | \$0.015 | \$0.015 | 4,000 |
| May | - | - | - | - |

| Month (2016) | High | Low | Close | Volume |
|--------------|--------|---------|---------|---------|
| April | \$0.03 | \$0.02 | \$0.02 | 26,000 |
| March | \$0.10 | \$0.01 | \$0.03 | 174,346 |
| February | \$0.08 | \$0.025 | \$0.025 | 113,500 |
| January | \$0.06 | \$0.025 | \$0.055 | 8,000 |

Summary of Monthly Trading – November 2020 Warrants

The Company's November 2020 Warrants were listed for trading on the TSX as of November 17, 2015, under the symbol "TMD.WT.F". The following table shows the close, high and low trading prices and the volume of warrants traded for the November 2020 Warrants of the Company for each month in 2016.

| Month (2016) | High | Low | Close | Volume |
|--------------|---------|---------|---------|-----------|
| December | \$0.045 | \$0.045 | \$0.045 | 500 |
| November | \$0.045 | \$0.045 | \$0.045 | 11,000 |
| October | \$0.07 | \$0.05 | \$0.05 | 4,075 |
| September | \$0.065 | \$0.045 | \$0.45 | 125,000 |
| August | \$0.075 | \$0.05 | \$0.055 | 206,850 |
| July | \$0.11 | \$0.08 | \$0.08 | 41,500 |
| June | \$0.11 | \$0.085 | \$0.11 | 26,500 |
| May | \$0.11 | \$0.06 | \$0.75 | 97,250 |
| April | \$0.145 | \$0.085 | \$0.11 | 268,000 |
| March | \$0.20 | \$0.07 | \$0.10 | 785,475 |
| February | \$0.41 | \$0.065 | \$0.09 | 3,108,169 |
| January | \$0.22 | \$0.15 | \$0.22 | 210,400 |

Summary of Monthly Trading – February 2021 Warrants

The Company's February 2021 Warrants were listed for trading on the TSX as of February 17, 2016, under the symbol "TMD.WT.G". The following table shows the close, high and low trading prices and the volume of warrants traded for the February 2021 Warrants of the Company for each month in 2016.

| Month (2016) | High | Low | Close | Volume |
|--------------|---------|---------|---------|-----------|
| December | \$0.05 | \$0.05 | \$0.05 | 17,000 |
| November | \$0.06 | \$0.05 | \$0.05 | 16,500 |
| October | \$0.08 | \$0.055 | \$0.06 | 55,000 |
| September | \$0.13 | \$0.055 | \$0.06 | 432,700 |
| August | \$0.20 | \$0.055 | \$0.145 | 579,391 |
| July | \$0.23 | \$0.18 | \$0.21 | 304,575 |
| June | \$0.24 | \$0.19 | \$0.20 | 547,360 |
| May | \$0.225 | \$0.175 | \$0.175 | 353,170 |
| April | \$0.25 | \$0.19 | \$0.205 | 876,566 |
| March | \$0.39 | \$0.105 | \$0.21 | 5,297,457 |
| February | - | - | - | - |
| January | - | - | - | - |

Summary of Monthly Trading – March 2021 Warrants

The Company's March 2021 Warrants were listed for trading on the TSX as of March 31, 2016, under the symbol "TMD.WT.H". The following table shows the close, high and low trading prices and the volume of warrants traded for the March 2021 Warrants of the Company for each month in 2016.

| Month (2016) | High | Low | Close | Volume |
|--------------|--------|---------|---------|-----------|
| December | \$0.06 | \$0.04 | \$0.06 | 21,500 |
| November | \$0.05 | \$0.03 | \$0.05 | 126,000 |
| October | \$0.08 | \$0.04 | \$0.08 | 89,100 |
| September | \$0.07 | \$0.05 | \$0.05 | 124,366 |
| August | \$0.15 | \$0.06 | \$0.09 | 327,100 |
| July | \$0.16 | \$0.135 | \$0.16 | 86,200 |
| June | \$0.16 | \$0.13 | \$0.135 | 737,081 |
| May | \$0.15 | \$0.12 | \$0.135 | 1,444,300 |
| April | \$0.18 | \$0.08 | \$0.14 | 4,351,190 |
| March | - | - | - | - |
| February | - | - | - | - |
| January | - | - | - | - |

Summary of Monthly Trading – September 2021 Warrants

The Company's September 2021 Warrants were listed for trading on the TSX as of September 20, 2016, under the symbol "TMD.WT.I". The following table shows the close, high and low trading prices and the volume of warrants traded for the September 2021 Warrants of the Company for each month in 2016.

| Month (2016) | High | Low | Close | Volume |
|--------------|--------|--------|---------|-----------|
| December | \$0.08 | \$0.05 | \$0.55 | 926,500 |
| November | \$0.08 | \$0.05 | \$0.05 | 1,786,817 |
| October | \$0.09 | \$0.07 | \$0.075 | 1,101,000 |
| September | \$0.10 | \$0.07 | \$0.08 | 1,154,800 |
| August | - | - | - | - |
| July | - | - | - | - |
| June | - | - | - | - |
| May | - | - | - | - |
| April | - | - | - | - |
| March | - | - | - | - |
| February | - | - | - | - |
| January | - | - | - | - |

ESCROWED SECURITIES

As of December 31, 2016, there were no Common Shares of the Company held, to the Company's knowledge, in escrow or that were subject to a contractual restriction on transfer.

DIRECTORS AND OFFICERS

The following sets out details respecting the directors and executive officers of the Company, as of the date of this Annual Information Form. The names, the municipalities of residence, the positions held by each in Titan and the principal occupation for the past five years of the directors and executive officers of the Company are as follows:

| Name and Municipality of Residence | Offices Held | Director Since | Principal Occupation(s) During the Five-Year Period Ending December 31, 2016 |
|---|---|----------------|---|
| David J. McNally | President, Chief Executive Officer and Director | 2017 | President and CEO of Titan from January 3, 2017 and January 9, 2017 respectively. Prior thereto, from October, 2009 to August 2016, Mr. McNally served as the founder, President, Chief Executive Officer and Chairman of the Board of Directors of Domain Surgical, Inc., a privately held developer, manufacturer and marketer of a new advanced energy surgery platform for precise cutting and coagulation of soft tissue, and reliable vessel sealing in open and laparoscopic procedures. |
| Stephen Randall Toronto, Ontario | Chief Financial Officer and Secretary | n/a | Chief Financial Officer of Titan since March 2010. Prior thereto, Mr. Randall served in senior financial roles with private, publicly-traded and start-up companies in the technology sector. Mr. Randall holds the Canadian CPA and CGA designations. |
| Martin C. Bernholtz ⁽¹⁾⁽²⁾ Thornhill, Ontario | Chairman & Director | 2008 | Vice President, Finance of Kerbel Group Inc., a Toronto-based land development company, since 1998. |
| John E. Barker ⁽¹⁾⁽²⁾ Burlington, Ontario | Director | 2009 | Corporate director. Previously served as Senior Vice President of Finance, CFO and in other senior executive positions at Zenon Environmental Inc. from 2000 to 2006. |
| Dr. Bruce Wolff ⁽¹⁾⁽²⁾ Rochester, Minnesota | Director | 2014 | Surgeon, Mayo Clinic since 1982; and Professor of Surgery, Mayo Clinic College of Medicine and Emeritus Chair of the Division of Colon & Rectal Surgery, Mayo Clinic. |

Notes:

- (1) Member of Audit Committee of the Company.
- (2) Member of Compensation Committee of the Company.

None of the directors or executive officers of the Company is, at the date hereof, or has within 10 years before the date hereof, been a director, chief executive officer or chief financial officer of any other issuer that (a) was the subject of a cease trade, an order similar to a cease trade order or an order that denied the issuer access to any statutory exemptions under securities legislation, that was in effect for a period of more than 30 consecutive days (an “Order”), that, while that person was acting in the capacity as a director, chief executive officer or chief financial officer, or (b) was subject to an order that was issued after that person ceased to be a director, chief executive officer

or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as a director, chief executive officer or chief financial officer.

None of the directors or executive officers of the Company (a) is, at the date hereof, or has within 10 years before the date hereof, been a director or executive officer of any other issuer that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, manager or trustee appointed to hold its assets, or (b) has, within 10 years before the date hereof, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, manager or trustee appointed to hold its assets

None of the directors or executive officers of the Company has been subject to (a) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority, or (b) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

The term of each director will expire at the next annual meeting of the Company. As at December 31, 2016, the directors and executive officers of the Company, as a group, beneficially owned, directly or indirectly, or exercised control or direction over 6,113,601 Common Shares of the Company, representing approximately 3.67% of the Company's outstanding Common Shares. The information as to securities beneficially owned or over which control or direction is exercised is not within the knowledge of the Company and has been furnished by the directors and executive officers individually. There are no material conflicts of interest among any of the directors or executive officers and the Company, other than any potential conflicts as disclosed above. See "*Risk Factors – Conflicts of Interest*".

AUDIT COMMITTEE

Audit Committee's Charter

See Schedule "A".

Composition of the Audit Committee

As of December 31, 2016, the table below sets out the members of the Audit Committee and states whether they are financially literate and/or independent.

| Director | Independent | Financially Literate |
|---------------------|-------------|----------------------|
| John E. Barker | Yes | Yes |
| Martin C. Bernholtz | Yes | Yes |
| Dr. Bruce Wolff | Yes | Yes |

Two directors on the Corporation's Audit Committee (namely, John E. Barker and Martin C. Bernholtz) have been senior officers and/or directors of publicly traded companies and business executives for a number of years. In these positions, each director has been responsible for receiving financial information relating to the entities of which they were directors. They had, or have developed, an understanding of financial statements generally and understand how those statements are used to assess the financial position of a company and its operating results. Each member of the Audit Committee also has a significant understanding of the business in which the Corporation is engaged and has an appreciation for the relevant accounting principles for the Corporation's business.

Pre-Approval Policies and Procedures

The Audit Committee has adopted a pre-approval policy with respect to permitted non-audit services proposed to be provided by the external auditor as disclosed in paragraph 3(a)(iv) of the Audit Committee's Charter (Schedule "A").

External Auditor Service Fees

The table below sets out all fees billed by the Corporation's external auditor in respect of the last two financial years.

| Financial Year Ended | Audit Fees ⁽¹⁾ | Audit-Related Fees ⁽²⁾ | Tax Fees ⁽³⁾ | All Other Fees ⁽⁴⁾ |
|----------------------|---------------------------|-----------------------------------|-------------------------|-------------------------------|
| December 31, 2016 | \$42,083 | \$25,774 | \$1,512 | \$44,143 |
| December 31, 2015 | \$28,606 | \$19,089 | \$2,072 | \$57,393 |

Notes:

1. "Audit Fees" are fees billed by the Corporation's external auditor for services provided in auditing the Corporation's financial statements for the financial year.
2. "Audit-Related Fees" are fees not included in Audit Fees that are billed by the auditor for assurance and related services that are reasonably related to performing the audit or reviewing the Corporation's interim financial statements.
3. "Tax Fees" are fees billed by the auditor for professional services rendered for tax compliance, tax advice and tax planning.
4. "All Other Fees" are fees billed by the auditor for products and services not included in the previous categories. These fees relate primarily to the work performed by the Auditors in conjunction with the public offerings completed by Titan in 2016.

PROMOTER

No person is or has been within the two years immediately preceding the date hereof, a promoter of the Company.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

There are no legal proceedings to which the Company is or was a party to, or that any of its property is or was the subject of, during the year ended December 31, 2016, and the Company is not aware of any such proceedings that are contemplated. No penalties or sanctions were imposed against the Company by a court relating to securities legislation or by a securities regulatory authority during the year ended December 31, 2016, nor has the Company entered into a settlement agreement with a securities regulatory authority, or been subject to any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Except as disclosed in this Annual Information Form, none of the directors or executive officers of the Company, or any person or company that beneficially owns, or controls or directs, directly or indirectly, more than 10% of any class or series of the Company's outstanding voting securities, or any associate or affiliate of any of the foregoing persons or companies, has or has had any material interest, direct or indirect, in any transaction within the three most recently completed financial years or during the current financial year that has materially affected or is reasonably expected to materially affect the Company.

TRANSFER AGENT AND REGISTRAR

Computershare Limited is the Company's registrar and transfer agent. The register of the transfers of the Common Shares of the Company are located at 8th Floor, 100 University Avenue, Toronto, Ontario M5J 2Y1.

MATERIAL CONTRACTS

The Company enters into a variety of contracts in the normal course of business. Material contracts entered into since January 1, 2016, or before January 1, 2016, but still in effect and that are or were required to be filed under Section 12.2 of National Instrument 51-102 *Continuous Disclosure Obligations* include the Warrant Indentures described under "*Capital Structure*".

EXPERTS

The auditors of the Company are BDO Canada LLP, Chartered Accountants, Licensed Public Accountants, who have prepared an independent auditors' report in respect of the Company's financial statements with accompanying notes as at and for the year ended December 31, 2016. BDO Canada LLP is independent in accordance with the Rules of Professional Conduct as outlined by the Institute of Chartered Professional Accountants of Ontario.

ADDITIONAL INFORMATION

Additional information regarding the Company's corporate governance practices, including the terms of reference for the Company's board of directors and the Company's board committees, is contained in the management information circular of the Company dated May 27, 2016. This document can be found on SEDAR at www.sedar.com.

Additional information relating to the Company may be found on SEDAR at www.sedar.com and on the Company's web site at www.titanmedicalinc.com.

Upon request to the Company's registered office at 170 University Avenue, Suite 1000, Toronto, Ontario M5H 3B3, the Company will provide any person with a copy of this annual information form and any other documents that are incorporated by reference into a preliminary short form prospectus or short form prospectus filed in respect of a distribution of securities of the Company.

A copy of any of these documents may be obtained without charge at any time when a preliminary short form prospectus has been filed in respect of a distribution of any securities of the Company or any securities of the Company are in the course of a distribution pursuant to a short form prospectus. At any other time, any document referred to above may be obtained by security holders of the Company without charge and by any other person upon payment of a reasonable charge.

Additional information including directors' and executive officers' remuneration and indebtedness, principal holders of the Company's securities and options to purchase securities, where applicable, is contained in the management information circular of the Company dated May 27, 2016. Additional financial information is provided in the Company's financial statements and management's discussion and analysis for the year ended December 31, 2016.

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SCHEDULE "A"

TITAN MEDICAL INC.

AUDIT COMMITTEE CHARTER

Purpose

The Audit Committee (the "**Audit Committee**" or the "**Committee**") is a committee of the board of directors (the "**Board of Directors**" or the "**Board**") of Titan Medical Inc. (the "**Company**"). Its primary function is to assist the Board in fulfilling its oversight responsibilities by evaluating and making recommendations to the Board as appropriate with respect to:

- financial reporting;
- the external auditors, including performance, qualifications, independence, and their audit of the Company's financial statements;
- internal controls and disclosure controls;
- financial risk management;
- the Company's Code of Business Conduct and Ethics (the "**Code**"); and
- related party transactions.

The Audit Committee will also have authority to review and, in its discretion, approve certain matters, in accordance with and within the limitations prescribed by this Charter.

The Audit Committee's primary function is to assist the Board of Directors in fulfilling its responsibilities. It is, however, the Company's management which is responsible for preparing the Company's financial statements and it is the Company's external auditors who are responsible for auditing those financial statements.

Composition and Member Qualification

The Committee shall, subject to applicable exemptions available under National Instrument 52-110 – *Audit Committees* ("**NI 52-110**"), be comprised of at least three directors, each of whom shall be an independent director of the Company (as defined below). Pursuant to NI 52-110 (as implemented by the Canadian Securities Administrators and as amended from time to time), a director is considered to be "independent" if he or she has no direct or indirect "material relationship" with the Company which is a relationship that could, in the view of the Board of Directors, be reasonably expected to interfere with the exercise of a director's independent judgment. Notwithstanding the foregoing, a director shall be considered to have a "material relationship" with the Company if he or she falls in one of the categories listed in Schedule A attached hereto.

Subject to an applicable exemption available under NI 52-110, all members of the Audit Committee must, to the satisfaction of the Board of Directors, be "financially literate" within the meaning of NI 52-110. NI 52-110 provides that a director will be considered "financially literate" if he or she has the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Company's financial statements.

Each member will have, to the satisfaction of the Board, sufficient skills and/or experience as are relevant and will be of contribution to the carrying out of the mandate of the Committee.

Appointment and Term of Office

Each member of the Committee and the Chair of the Committee shall be appointed from and by the Board of Directors, on the recommendation of the Corporate Governance and Nominating Committee, at the time of each annual meeting of the shareholders of the Company, and shall hold office until the next annual meeting.

Any member of the Committee may be removed or replaced at any time by the Board and shall cease to be a member of the Committee upon ceasing to be a director.

The Board may fill vacancies on the Committee by appointment from among its members. If and whenever a vacancy shall exist on the Committee, the remaining members may exercise all their powers so long as a quorum remains in office.

Meetings

The Committee is to meet at least four times annually (and more frequently if circumstances require). The Audit Committee is to meet prior to filing the quarterly financial statements in order to review and discuss the unaudited financial results for the preceding quarter and the related management's discussion and analysis ("MD&A") and is to meet prior to filing the annual audited financial statements and MD&A in order to review and discuss the audited financial results for the year and related MD&A.

The Audit Committee will meet periodically with management and the external auditors in separate sessions to discuss any matters that the Audit Committee or each of these groups believe should be discussed privately. The Audit Committee shall meet with the external auditors in a separate session at each regularly scheduled meeting of the Committee at which such auditors are present.

A quorum for the transaction of business at any meeting of the Committee is the presence in person or via teleconference or video-conference of a simple majority of the total number of members of the Committee. If within one hour of the time appointed for a meeting of the Committee, a quorum is not present, the meeting shall stand adjourned to the same hour on the second business day following the date of such meeting at the same place. If at the adjourned meeting a quorum as hereinbefore specified is not present within one hour of the time appointed for such adjourned meeting, the quorum for the adjourned meeting will consist of the members then present.

Meetings of the Committee shall be held from time to time and at such place as the Committee or the Chair of the Committee may determine, within or outside Canada, upon not less than 48 hours' prior notice to each of the members.

Meetings of the Committee may be held without 48 hours' prior notice if all of the members entitled to vote at such meeting who do not attend, waive notice of the meeting and, for the purpose of such meeting, the presence of a member at such meeting shall constitute waiver on his or her part. Any member of the Committee or the Chairman of the Board shall be entitled to request that the Chair of the Committee call a meeting. A notice of a meeting of the Committee may be given verbally, in writing or by telephone, fax or other means of communication, and need not specify the purpose of the meeting. Members of the Committee may attend meetings of the Committee by teleconference or video-conference.

The Committee shall keep minutes of its meetings which shall be submitted to the Board of Directors. The Committee may, from time to time, appoint any person who need not be a member, to act as secretary at any meeting.

All decisions of the Committee will require the vote of a majority of its members present at a meeting at which a quorum is present. Actions of the Committee may be taken by an instrument or instruments in writing signed by all of the members of the Committee, and such actions shall be effective as though they had been decided by a majority of votes cast at a meeting of the Committee called for such purpose. Such instruments in writing may be signed in counterparts each of which shall be deemed to be an original and all originals together shall be deemed to be one and the same instrument.

The Committee shall meet in camera, without management, at each meeting of the Committee, and otherwise as considered appropriate by the members of the Committee. Any member of the Committee may move the Committee in camera at any time during the course of a meeting, and a record of any decisions made in camera shall be maintained by the Chair of the Committee.

Duties and Responsibilities

To fulfill its duties and responsibilities, the Audit Committee shall evaluate and make recommendations to the Board, or approve, as appropriate, with respect to the following matters:

1. General Responsibilities

- a. Create and maintain a Committee plan for the year.
- b. Review and assess this Charter at least annually, prepare revisions to its provisions as conditions dictate, and refer its assessment and any proposed revisions to the Corporate Governance and Nominating Committee or the Board.
- c. Report and make recommendations periodically to the Board on the matters covered by this Charter.
- d. Perform any other activities consistent with this Charter, the Company's Articles and By-Laws and governing law, as the Audit Committee or the Board of Directors deems necessary or appropriate.

2. Financial Reporting

- a. Recommend to the Board for approval:
 - i. the Company's quarterly and annual financial statements and related MD&A;
 - ii. all other financial statements that require approval by the Board, including financial statements for use in prospectuses or other offering or public disclosure documents and financial statements required by regulatory authorities; and
 - iii. financial information for use in press releases, including annual and interim profit or loss press releases, prior to their publication and/or filing with any governmental body and/or release.
- b. Overseeing the work of the external auditor engaged for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for the Company, including the resolution of disagreements between management and the external auditor regarding financial reporting.
- c. Before the release of financial statements and related disclosures to the public, obtain confirmation from the CEO and CFO as to the matters addressed in the certifications required by the securities regulatory authorities.
- d. Review any litigation, claim or other contingency that could have a material effect on the financial statements.
- e. Review the external auditors' judgments about the quality and appropriateness, not just the acceptability, of the Company's accounting principles and financial disclosure practices, as applied in its financial reporting.

- f. Review the status of significant accounting estimates and judgments and special issues (e.g., major transactions, changes in the selection or application of accounting policies, off-balance sheet items, effect of regulatory and financial initiatives).
- g. Review and approve, if appropriate, major changes to the Company's accounting principles and practices as suggested by management with the concurrence of the external auditors.

3. External Auditor

- a. Recommend to the Board of Directors: (i) the selection of the external auditors, considering independence and effectiveness; and (ii) the fees and other compensation to be paid to the external auditors.
- b. Require, in accordance with applicable law that the external auditors report directly to the Audit Committee.
- c. Pre-approve all audit and non-audit services to be provided to the Company or its subsidiaries by the external auditors in a manner consistent with NI 52-110.
- d. Oversee the work and review the performance of the external auditors and approve any proposed discharge of the external auditors when circumstances warrant.
- e. Monitor the relationship between management and the external auditors, including reviewing any management letters or other reports of the external auditors.
- f. Discuss with the external auditor any (i) difference of opinion with management on material auditing or accounting issues, and (ii) any audit problems or difficulties experienced by the external audit in performing the audit. Where there are significant unsettled issues, the Audit Committee is to assist in arriving at an agreed course of action for the resolution of such matters.
- g. Periodically consult with the external auditors without management present about significant risks or exposures, internal controls and other steps that management has taken to control such risks, and the completeness and accuracy of the Company's financial statements. Particular emphasis should be given to the adequacy of internal controls to expose any payments, transactions, or procedures that might be deemed illegal or otherwise improper.
- h. Review and discuss, on an annual basis, with the external auditors all significant relationships they have with the Company to determine their independence.
- i. Review and approve the Company's hiring policies regarding partners, employees and former partners and employees of the Company's external auditors.
- j. Consider any matter required to be communicated to the Audit Committee by the external auditors under applicable generally accepted auditing standards, applicable law and listing standards, including the auditor's report to the Audit Committee (and management's response thereto).

4. Monitoring Financial Matters, Internal Controls, Management Systems and Disclosure Controls

- a. Oversee management's review of the adequacy of the Company's accounting and financial reporting systems, including with respect to the integrity and quality of the Company's financial statements and other financial information.
- b. Oversee management's review of the adequacy of the Company's internal controls and management systems to safeguard assets from loss and unauthorized use and to verify the accuracy of the financial records.

- c. In consultation with the Corporate Governance and Nominating Committee, oversee management's disclosure controls and procedures regarding the Company's financial information to confirm that the Company's financial information that is required to be disclosed under applicable law or stock exchange rules is disclosed.
 - d. Review any special audit steps adopted in light of material control deficiencies.
- 5. Risk Management
 - a. Review management's assessment and management of financial risk, including insurance coverage, and obtain the external auditors' opinion of management's assessment of significant financial risks facing the Company and how effectively such risks are being managed or controlled.
- 6. Code of Business Conduct and Ethics
 - a. Recommend to the Board any significant changes to the Code, monitor compliance with the Code and ensure that management has established a system to enforce the Code. Review appropriateness of actions taken to ensure compliance with the Code and review the results of confirmations and violations thereof.
 - b. Oversee procedures in the Code for (i) the receipt, retention and treatment of complaints received by the Company regarding accounting, internal controls or auditing matters, and (ii) the confidential, anonymous submission by employees of concerns regarding questionable accounting or auditing matters.
 - c. Approve any waiver from compliance with the Code for directors and executive officers, promptly report any such waiver to the Board, and ensure appropriate disclosure of any such waiver.

Each of which shall be conducted with the Corporate Governance and Nominating Committee.

- 7. Related Party Transactions
 - a. Review and pre-approve all proposed related party transactions and situations involving a potential or actual conflict of interest involving a director, member of executive management, or affiliate, that are not required to be dealt with by an "independent committee" pursuant to securities laws, other than routine transactions and situations arising in the ordinary course of business, consistent with past practice.
- 8. Financial Legal Compliance
 - a. Review management's monitoring of the Company's systems in place to ensure that the Company's financial statements, reports and other financial information disseminated to governmental organizations and the public satisfy legal requirements.
 - b. Review with legal counsel any legal matters that could have a significant effect on the Company's financial statements.
 - c. Review with legal counsel the Company's compliance with applicable law and inquiries received from regulators and governmental agencies to the extent they may have a material impact on the financial position of the Company.

9. Expense Accounts and Management Perquisites

- a. Recommend to the Board policies and procedures with respect to directors' and executive management's expense accounts and management perquisites and benefits, including their use of corporate assets and expenditures related to executive travel and entertainment, and review the results of the procedures performed in these areas by the external auditors.

10. Succession Planning

- a. Consult with the Compensation Committee and Corporate Governance and Nominating Committee on succession planning for the directors and executive management.

11. Disclosure of Audit Committee Function

- a. Oversee the preparation of, and recommend to the Board, the disclosure of the Audit Committee's composition and responsibilities and how they were discharged as required to be published annually in the Company's management information circular or annual information form pursuant to applicable law (including NI 52-110).
- b. Approve any other significant information relating to matters within this Charter contained in the Company's disclosure documents.

12. Legal Compliance

- a. Oversee management's compliance with laws with respect to the audit function, and recommend to the Board any changes to the Company's practices in these areas.
- b. Satisfy itself that management monitors significant trends in the area of financial reporting, and evaluates their impact on the Company.

The foregoing list is not exhaustive. The Audit Committee may, in addition, perform such other functions as may be necessary or appropriate for the performance of its responsibilities and duties.

Responsibilities of Committee Chair

The primary responsibility of the Chair of the Audit Committee is to be responsible for the management and effective performance of the Committee and provide leadership to the Committee in fulfilling this Charter and any other matters delegated to it by the Board. To that end, the Committee Chair's duties and responsibilities shall include:

- a. Working with the Board Chair, the Chief Executive Officer and the Corporate Secretary to establish the frequency of Committee meetings and the agendas for such meetings.
- b. Providing leadership to the Committee and presiding over Committee meetings.
- c. Facilitating the flow of information to and from the Committee and fostering an environment in which the Committee members may ask questions and express their viewpoints.
- d. Reporting to the Board with respect to the significant activities of the Committee and any recommendations made by the Committee.
- e. Taking such other steps as are reasonably required to ensure that the Committee carries out this Charter.

Other Organizational Matters

13. The members and the Chair of the Committee shall be entitled to receive remuneration for acting in such capacity as the Board may from time to time determine.
 - a. The Committee shall have the resources and authority appropriate to discharge its duties and responsibilities, including the authority to:
 - i. engage, select, retain, terminate, set and approve the fees and other compensation and other retention terms of special or independent counsel, accountants or other advisors, as it deems appropriate;
 - ii. obtain appropriate funding to pay, or approve the payment of, such approved fees; at the expense of the Company; and
 - iii. communicate directly with the internal and external auditors.
14. The Committee shall have full access to books, records, facilities, and personnel of the Company, as it deems necessary to carry out its duties.
15. The Committee's performance shall be evaluated annually, in accordance with a process developed by the Corporate Governance and Nominating Committee and approved by the Board, and results of that evaluation shall be reported to the Corporate Governance and Nominating Committee and to the Board.

**Schedule A
to Audit Committee Charter**

Material Relationship

I Material Relationships

1. An audit committee member is independent if he or she has no direct or indirect material relationship with the issuer.
2. For the purposes of subsection (1), a “material relationship” is a relationship which could, in the view of the issuer's board of directors, be reasonably expected to interfere with the exercise of a member's independent judgement.
3. Despite subsection (2), the following individuals are considered to have a material relationship with an issuer:
 - a. an individual who is, or has been within the last three years, an employee or executive officer of the issuer;
 - b. an individual whose immediate family member is, or has been within the last three years, an executive officer of the issuer;
 - c. an individual who:
 - (i) is a partner of a firm that is the issuer's internal or external auditor,
 - (ii) is an employee of that firm, or
 - (iii) was within the last three years a partner or employee of that firm and personally worked on the issuer's audit within that time;
 - d. an individual whose spouse, minor child or stepchild, or child or stepchild who shares a home with the individual:
 - (i) is a partner of a firm that is the issuer's internal or external auditor,
 - (ii) is an employee of that firm and participates in its audit, assurance or tax compliance (but not tax planning) practice, or
 - (iii) was within the last three years a partner or employee of that firm and personally worked on the issuer's audit within that time;
 - e. an individual who, or whose immediate family member, is or has been within the last three years, an executive officer of an entity if any of the issuer's current executive officers serves or served at that same time on the entity's compensation committee; and
 - f. an individual who received, or whose immediate family member who is employed as an executive officer of the issuer received, more than \$75,000 in direct compensation from the issuer during any 12 month period within the last three years.

4. Despite subsection (3), an individual will not be considered to have a material relationship with the issuer solely because
 - a. he or she had a relationship identified in subsection (3) if that relationship ended before March 30, 2004; or
 - b. he or she had a relationship identified in subsection (3) by virtue of subsection (8) if that relationship ended before June 30, 2005.
5. For the purposes of clauses (3)(c) and (3)(d), a partner does not include a fixed income partner whose interest in the firm that is the internal or external auditor is limited to the receipt of fixed amounts of compensation (including deferred compensation) for prior service with that firm if the compensation is not contingent in any way on continued service.
6. For the purposes of clause (3)(f), direct compensation does not include:
 - a. remuneration for acting as a member of the board of directors or of any board committee of the issuer, and
 - b. the receipt of fixed amounts of compensation under a retirement plan (including deferred compensation) for prior service with the issuer if the compensation is not contingent in any way on continued service.
7. Despite subsection (3), an individual will not be considered to have a material relationship with the issuer solely because the individual or his or her immediate family member
 - a. has previously acted as an interim chief executive officer of the issuer, or
 - b. acts, or has previously acted, as a chair or vice-chair of the board of directors or of any board committee of the issuer on a part-time basis.
8. For the purpose of this section I, an issuer includes a subsidiary entity of the issuer and a parent of the issuer.

II Additional Independence Requirements

1. Despite any determination made under section I, an individual who
 - a. accepts, directly or indirectly, any consulting, advisory or other compensatory fee from the issuer or any subsidiary entity of the issuer, other than as remuneration for acting in his or her capacity as a member of the board of directors or any board committee, or as a part-time chair or vice-chair of the board or any board committee; or
 - b. is an affiliated entity of the issuer or any of its subsidiary entities, is considered to have a material relationship with the issuer.
2. For the purposes of subsection (1), the indirect acceptance by an individual of any consulting, advisory or other compensatory fee includes acceptance of a fee by
 - a. an individual's spouse, minor child or stepchild, or a child or stepchild who shares the individual's home; or
 - b. an entity in which such individual is a partner, member, an officer such as a managing director occupying a comparable position or executive officer, or occupies a similar position (except limited partners, non-managing members and those occupying similar

positions who, in each case, have no active role in providing services to the entity) and which provides accounting, consulting, legal, investment banking or financial advisory services to the issuer or any subsidiary entity of the issuer.

3. For the purposes of subsection (1), compensatory fees do not include the receipt of fixed amounts of compensation under a retirement plan (including deferred compensation) for prior service with the issuer if the compensation is not contingent in any way on continued service.

Effective: February 10, 2015