This presentation contains "forward-looking statements" which reflect the current expectations of management of the Company's future growth, results of operations, technological development and implementation, performance and business prospects, opportunities, and illustrations and prototypes of the Amadeus Surgical Systems. Wherever possible, words such as "may", "would", "could", "will", "anticipate", "believe", "plan", "expect", "intend", "estimate" and similar expressions have been used to identify these forward-looking statements. These statements reflect management's current beliefs with respect to future events and are based on information currently available to management. Forward-looking statements involve significant risks, uncertainties and assumptions. Many factors could cause the Company's actual results, performance, achievements or technological development and implementation to be materially different from any future results, performance, achievements or technological development and implementation that may be expressed or implied by such forward-looking statements, including, without limitation, those listed in the "Risk Factors" section of the Company's Annual Information Form dated April 10, 2013 and other information contained in the Company’s public filings (which may be viewed at www.sedar.com). Information contained in this presentation is qualified in its entirety by such public filings. Should one or more of these risks or uncertainties materialize, or should assumptions underlying the forward looking statements prove incorrect, actual results, performance or achievements may vary materially from those expressed or implied by the forward-looking statements contained in this presentation. These factors should be considered carefully and prospective investors should not place undue reliance on the forward-looking statements. Although the forward-looking statements contained in the presentation are based upon what management currently believes to be reasonable assumptions, the Company cannot assure prospective investors that actual results, performance or achievements will be consistent with these forward-looking statements. This presentation does not constitute an offer to sell any class of securities of the Company in any jurisdiction.
Vision: To become the leading choice for robotic surgery products and services in the world

Mission: To provide an effective, efficient and robust platform that expands utilization of robotic surgery
Company Highlights

- Targeting highly attractive and rapidly growing robotic surgery market
- Developing highly innovative single port device with growing IP portfolio
- Established a well-defined development and commercialization plan
- Small footprint, lower cost, high dexterity robotic platform that will dramatically increase the size of the market
- Attractive “Razor / Razorblade” financial model
- Highly experienced management team and medical advisors
• "450,000 robotic surgeries performed worldwide in 2012

• Gynecology and Urology procedures represent 80% of those surgeries

• Titan’s SPORT™ Surgical System to initially target General Surgery

• Estimated annual market of $4 billion*

*Robotic surgery was first commercially introduced in the year 2000, and in twelve years grew to over a $2 billion industry, with some industry projections forecasting growth to a $4+ billion industry by 2016. Source: Public company filings and industry research.
Market Drivers: Hospital Trends

Hospitals are changing to clinical efficiency models, which robotic surgery addresses:

- Continued movement from open to minimally invasive surgery
- Incentivized for patients to have shorter length of stays
- Looking to reduce complication and infection rates
- Managing budgets that emphasize cost-conscious, clinically efficient solutions
- Introduction of pay-for-performance and bundle payment environment
- Greater emphasis on ROI
Robotic Technology Enables MIS

**Open Surgery**
- Requires large incisions
- Long recovery times
- Increased infection rates
- Increased blood transfusion rates

**Robotic Minimally Invasive Surgery**
- Enhances surgeon skills and reduces variability
- Reduces incision size and improves recovery
- Enhanced opportunities for surgery simulation
Progress to Single Incision Surgery

Open Surgery → Multi-port Surgery → Single Incision Surgery
Challenges With Existing Robotic Technologies

- **Size of Robot**
  - Size of existing robotic solutions can lead to the need for a dedicated operating room

- **Cost**
  - Cost of existing robotic solutions prevent broader adoption of robotic technology in the operating room

- **Market Penetration**
  - Expense and dexterity limit the current market penetration

- **Training**
  - Complex technology requires greater attention to initial and recurrent training

Current challenges with existing robotic solutions impact utilization and have lead some hospitals to question the return on investment
Titan’s SPORT™ Surgical System

Size of Robot
- Small footprint provides easy setup and maneuverability

Cost
- Capital cost ~ $600k

Market Penetration
- Improved instrument dexterity and reach expands market penetration

Training
- Simulation allows quicker and more efficient procedure training

Titan believes that the smaller footprint, lower cost and improved dexterity of the SPORT™ Surgical System will drive utilization and enhance return on investment for hospitals
• Top priorities are time to market and designing the right product
• Focused on the most critical technical areas first in order to reduce risk
  - Instruments
  - Surgeon controls
  - Visualization
• Regulatory strategy
• Risk management strategy
• Intellectual property strategy
Instruments

- Developed multi-articulating instruments incorporating patent-pending technology
- Demonstrated successful instrument functionality
  - Workspace
  - Dexterity
  - Rigidity
  - Swap

<table>
<thead>
<tr>
<th>150 Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 Prototypes tested</td>
</tr>
<tr>
<td>6 Prototypes refined/evaluated</td>
</tr>
<tr>
<td>240 Hours field research</td>
</tr>
<tr>
<td>60 Hours surgeon interviews</td>
</tr>
</tbody>
</table>
Surgeon Controls

- Enabled user to control robotic instruments through one-to-one movements of the surgeon controllers
- Controls system designed to require minimal learning curve and provide a natural extension of the users’ arms
- Developed simulation and training system

Software Code

16,000+ Lines of code

120 Hours field research

Kinematics

Simulation Tool
Visualization

- Developed a custom visualization system to address single incision robotic surgery
- Developed custom 3D HD camera capable of motorized pan and tilt
- Developed custom image processing system
- Developed camera lens wash system
- Developed custom fiber optic based illumination

<table>
<thead>
<tr>
<th>75</th>
<th>Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Prototypes tested</td>
</tr>
<tr>
<td>4</td>
<td>Prototypes refined/evaluated</td>
</tr>
<tr>
<td>40</td>
<td>Hours field research</td>
</tr>
</tbody>
</table>
Customer-Oriented Approach

- Sterile field management
- Flexibility / mobility
- Re-processing
- Satisfying all users’ needs
  - Hospital material managers
  - Central supply
  - Surgical support staff
  - Etc.

7
End user-types

12
Secondary user interviews

30+
Additional considerations identified
# Robotic Platform Analysis

<table>
<thead>
<tr>
<th>Titan Medical’s SPORT™</th>
<th>Intuitive Surgical’s da Vinci® SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost: Estimated $0.6mm</td>
<td>Cost: Approximately $2mm</td>
</tr>
<tr>
<td>Small ambulatory footprint</td>
<td>Large footprint; primarily stationary</td>
</tr>
<tr>
<td>Designed for single port access</td>
<td>Designed for multi port access</td>
</tr>
<tr>
<td>Improved instrument dexterity increases surgical opportunities</td>
<td>Fewer targeted surgical opportunities</td>
</tr>
<tr>
<td>Focus on same day and ambulatory procedures</td>
<td>Focus on complex procedures</td>
</tr>
</tbody>
</table>
- Understood the needs of end users through voice of customer research
- Conducted field research and surgical case observations
- Identified unmet market needs
- Identified gaps between licensed technology and targeted commercial product
- Established a strategic product development plan to realize product
Key Milestones

- U.S. Initiation of Human Clinical Trials
- Initiation of Cadaver and Tissue Studies
- Outside U.S. Approvals (CE Mark)
- Outside U.S. Market Launch
- FDA 510(K) Approval

Catalysts Increasing Shareholder Value

- 2H 2013: Initiation of Cadaver and Tissue Studies
- 2H 2014: U.S. Initiation of Human Clinical Trials
- 2H 2014: Outside U.S. Approvals (CE Mark)
- 1H 2015: Outside U.S. Market Launch
- 2H 2015: FDA 510(K) Approval
Business Model

One Time

System Sales
6,500 placement opportunities in the U.S.

Recurring Revenue

Disposable Instruments

Service Agreements

- System sales to expand existing robotic surgery programs at a lower cost in hospitals with a robotic program
- System sales to initiate robotic programs at an affordable cost in hospitals without a robotic program
- Recurring revenue from disposable components and service agreements
- Proven business model in the market
## Financial Snapshot

<table>
<thead>
<tr>
<th>Ticker symbol</th>
<th>TMD (TSX Venture), TITXF (OTCQX)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share price - TMD (July 29, 2013)</td>
<td>$0.58</td>
</tr>
<tr>
<td>Cash and cash equivalents (June 30, 2013)</td>
<td>$6,162,590</td>
</tr>
<tr>
<td>Current burn rate (June 30, 2013)</td>
<td>$500,000 - $700,000 per month</td>
</tr>
<tr>
<td>Shares outstanding (June 30, 2013)</td>
<td>71,527,920 (72,945,888 *FD)</td>
</tr>
<tr>
<td>Market value (July 29, 2013)</td>
<td>$41,486,194 ($42,308,615 *FD)</td>
</tr>
<tr>
<td>Security offerings:</td>
<td></td>
</tr>
<tr>
<td>• March 2013</td>
<td>6,260,763 units ($6,573,801 gross proceeds)</td>
</tr>
<tr>
<td>• March 2012</td>
<td>1,986,755 units ($3,000,000 gross proceeds)</td>
</tr>
<tr>
<td>• December 2011</td>
<td>4,880,000 units ($7,564,000 gross proceeds)</td>
</tr>
<tr>
<td>• June 2011</td>
<td>5,577,500 units ($9,202,875 gross proceeds)</td>
</tr>
<tr>
<td>• December 2010</td>
<td>5,000,000 units ($8,250,000 gross proceeds)</td>
</tr>
<tr>
<td>Management ownership (June 30, 2013)</td>
<td>8.88%</td>
</tr>
</tbody>
</table>

*Fully diluted includes, under the Treasury Stock method, an additional 2,125,778 options with a weighted-average exercise price of $0.63.
In addition, 5,000,000 warrants (@$1.85 expiring December 10, 2015), 5,577,500 warrants (@$2.00 expiring June 10, 2016), 4,880,000 warrants (@$1.75 expiring December 22, 2016), 1,986,755 warrants (@$1.77 expiring March 14, 2017) and 6,260,733 warrants (@$1.25 expiring March 31, 2018) are outstanding.
Clinical Site Partners

ROCHESTER GENERAL HOSPITAL

UNIVERSITY of FLORIDA

Children's Hospital Boston

CROUSE HOSPITAL

Apollo Hospitals

THE OHIO STATE UNIVERSITY
## Management Team

<table>
<thead>
<tr>
<th>Name &amp; Position</th>
<th>Background</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>John Hargrove</strong></td>
<td>• Over 30 years of executive-level health care experience with the majority spent with Johnson and Johnson in the operating companies of Ethicon, Ethicon Endo-Surgery and Johnson and Johnson Health Care Systems</td>
</tr>
<tr>
<td><strong>CEO</strong></td>
<td>• Previous positions include Vice-President of Corporate Accounts for Johnson &amp; Johnson and President, Corporate Account Management for Ohmeda Inc.</td>
</tr>
<tr>
<td><strong>Reiza Rayman, MD, PhD</strong></td>
<td>• Clinical research in robotic surgery since 1998</td>
</tr>
<tr>
<td><strong>President</strong></td>
<td>• Collaborated in world’s first endoscopic robotic coronary artery bypass (1999)</td>
</tr>
<tr>
<td><strong>Stephen Randall, CGA</strong></td>
<td>• Served as an auditor, CFO, corporate controller and accountant for several public and private companies and government organizations</td>
</tr>
<tr>
<td><strong>CFO</strong></td>
<td>• Experience in tax planning/compliance, M&amp;A, IT &amp; operations</td>
</tr>
<tr>
<td><strong>Joe Talarico, JD</strong></td>
<td>• Various positions with Intuitive Surgical Inc., including Area Training Director, Clinical Sales Manager, Area Sales Manager and Clinical Sales Representative (2004-2009)</td>
</tr>
<tr>
<td><strong>VP, Business Development</strong></td>
<td>• Territory Manager for U.S. Surgical Corporation training and selling laparoscopic equipment (2003-2004)</td>
</tr>
<tr>
<td><strong>John Valvo, MD</strong></td>
<td>• Executive Director of Robotic and Minimally Invasive Surgery and former Chief of Urology at Rochester General Hospital in Rochester, New York</td>
</tr>
<tr>
<td><strong>VP, Medical Affairs</strong></td>
<td>• Founder of the robotic program at Rochester General Hospital</td>
</tr>
<tr>
<td></td>
<td>• Has performed over 600 robotic prostatectomies</td>
</tr>
</tbody>
</table>
## Medical Advisors

<table>
<thead>
<tr>
<th>Name</th>
<th>Background</th>
</tr>
</thead>
</table>
| Dennis Fowler, MD           | • Co-inventor of the Insertable Robotic Effector Platform (IREP) technology licensed by Titan from Columbia University  
• The Gerald and Janet Carrus Professor of Surgical Science and Director of the Center for Innovation and Outcomes Research in the Department of Surgery, Columbia University College of Physicians and Surgeons  
• Medical Director of Simulation Center, NY Presbyterian Hospital / Columbia University Medical Center                                                                                                                               |
| Douglas Boyd, MD            | • Director of Robotics & Professor of Cardiothoracic Surgery at UC Davis  
• Completed world’s first robotic beating heart cardiac bypass surgery                                                                                                                                                                                                 |
| Bob Kiaii, MD               | • Chief of Cardiac Surgery at London Health Sciences Centre - University Hospital and Associate Professor and Chair of the Division of Cardiac Surgery at the Schulich School of Medicine, Western University  
• Research activity includes robotic-assisted cardiac surgery, harvesting of arterial conduits for MIS and robotic cardiac surgery                                                                                                           |
| Hiep Thieu Nguyen, MD       | • Associate Professor in Surgery (Urology) at Harvard Medical School and the Director of Robotic Surgery, Research and Training Center at Children’s Hospital, Boston                                                                                                                                                                          |
| David M. Albala, MD         | • Chief of Urology at Crouse Hospital in Syracuse, New York and Medical Director for Associated Medical Professionals  
• Over 20 years of laparoscopic and robotic urological surgery expertise                                                                                                                                                                                                 |
## Medical Advisors (cont’d)

<table>
<thead>
<tr>
<th>Name</th>
<th>Background</th>
</tr>
</thead>
</table>
| **Louis Eichel, MD**                | • Urologist in Rochester, New York and serves as an expert reviewer for Journal of Urology and the Journal of Endourology, where he is Top Reviewer  
• Extensive background in researching the clinical aspects of surgical robotics and surgical simulation |
| **Po N. Lam, MD**                   | • Director of Robotics Surgery at Community General Hospital in Syracuse, New York and is a diplomate of the American Board of Urology  
• Has performed over 500 robotic surgeries since 2006 |
| **Carlo Camargo Passerotti, MD, PhD** | • Assistant Professor of Urology at the Sao Paulo State University, Director of Robotic Surgery at the Hospital Alemão Oswaldo Cruz, and Director of Research in Urology, University of Sao Paulo, Brazil |
| **Eric J. Moore, MD**               | • Associate Professor of Otolaryngology (ENT) at Mayo Clinic  
• Research includes oropharyngeal cancer, transoral robotic surgery for head and neck cancer, head and neck microvascular reconstruction, novel detection and treatment methods for papilloma virus induced oropharyngeal cancer  
• Named in over 30 publications, certified by the American Board of Facial Plastic and Reconstructive Surgery and American Board of Otolaryngology |
| **Li-Ming Su, MD**                  | • David A. Cofrin Professor of Urology, Associate Chairman for Clinical Affairs and the Director of Robotic and Minimally Invasive Urologic Surgery in the Department of Urology at the University of Florida College of Medicine in Gainesville, Florida  
• Areas of surgical specialty include robotic partial nephrectomy, nerve-sparing radical prostatectomy, pyeloplasty, nephroureterectomy and adrenalectomy |
### Medical Advisors (cont’d)

<table>
<thead>
<tr>
<th>Name</th>
<th>Background</th>
</tr>
</thead>
</table>
| **Balasubramanian Sivakumar, MD** | • Vice President of St. Joseph's Hospital Health Center in Syracuse, New York and President elect of the medical staff for 2012  
• Robotic surgery proctor/mentor who trained numerous surgeons practicing robotic surgery in specialties including General Surgery; Cardiac Surgery; Urologic Surgery; Thoracic Surgery, and Gynecologic Surgery |
| **Terry W. Grogg, MD** | • Clinical instructor for resident education at Mount Carmel West and at The Ohio State University since 1992, and partner at Southwestern Obstetrics and Gynecology, a division of MOCA, a private practice  
• Main clinical and surgical research interests in Minimally Invasive Surgery include hysterectomies, myomectomies, excision of endometriosis, unilateral salpingo oophorectomy, bilateral salpingo oophorectomy, and sacrocolpopexy |