



TITAN MEDICAL INC.



“Developing the **Next Generation**
Robotic Surgical System”

December 2011

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 System. 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 March 31, 2011 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.

Utilize advanced technology to become the leading robotic surgical system in small to medium size surgical spaces

- Rapidly growing global robotic surgical market
- Targeting new surgical specialties where Titan's robotic solution provides clear competitive advantages
- Established and well defined development plan
- Differentiated technology with growing IP portfolio
- Attractive financial model – “Razor / Razorblade”
- Highly experienced management team and medical advisors

Robotic Surgery Market: Long-Term Growth Drivers

- Value proposition for patients, hospitals, surgeons and payors
- Patients drive paradigm shift (MIS & efficacious results)
- Market competition and hospital perception to drive technology adoption
- Procedure volume will continue to grow in urology and gynecology
- General surgery, ENT & thoracic appear to be next specialties for adoption

Estimated Annual Market of \$5 Billion*

* Robotic surgery was first commercially introduced in the year 2000, and in ten years has grown to a \$1 billion industry, with some industry projections forecasting growth to a \$5+ billion industry. Source: Public company filings.

Shortcomings of Current Surgery Options

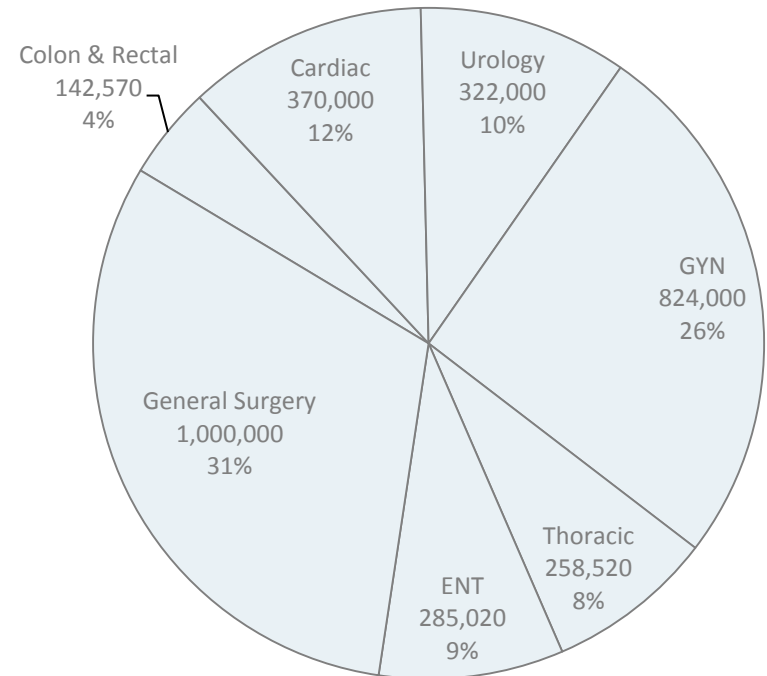
Open Surgery

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

Minimally Invasive Surgery

- Limitation of surgical instruments
- Need for improved visualization
- Inadequate training and simulation

- 278,000 surgeries are currently done robotically
- Over 3.2 million newly diagnosed cases each year
- Hysterectomy and prostatectomy represent 75% of those surgeries
- Titan to initially target general surgery, ENT and thoracic with additional applications in urology and gynecology



For The Surgeon

- Magnified 3D visualization for optimum viewing within the operative site
- Increased precision, control and range of motion of micro-instruments
- Improved access to and manipulation of organs, tissues and nerves

For The Patient

- Shorter hospitalization
- Reduced pain
- Faster recovery times
- Smaller incisions, resulting in reduced risk of infection, blood loss and scarring
- Autologous donation not required

For The Hospital

- Increased efficiency
- Hospitals are increasingly using robotic technology as a key marketing tool

Challenges within Existing Robotic Technology

- Existing technologies have limited mobility and feedback capabilities
- Broader adoption into more surgical procedures would be driven by:

Increased Mobility and Dexterity of Robotic Arms, Particularly Within "Small Space" Surgeries

Superior Control and Feedback to Feel the Impact on Tissue and Surrounding Organs

Improved Visualization Features

Communication Capabilities

More Robust Training / Simulation Applications

- Increased flexibility and open architecture for expansion of robotic surgery into untapped specialties
- Robotic arms tailored for specialties that are currently <1% penetrated
- Haptics (force feedback) – Increased operator precision and accuracy
- Patient cart tailored for small to medium size surgical spaces



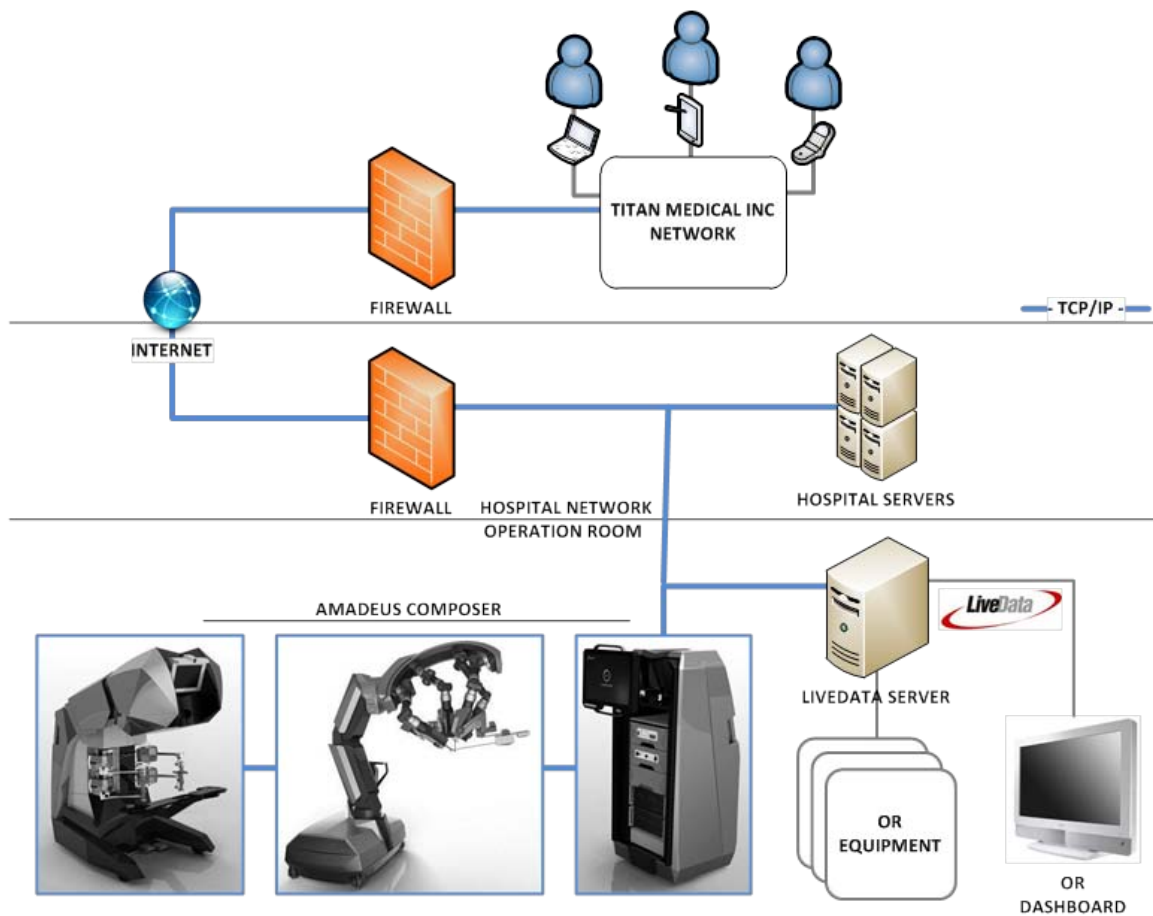
Increased Mobility and Dexterity of Robotic Arms

- Snakelike, multi articulating arms give multiple approach paths to a surgical target

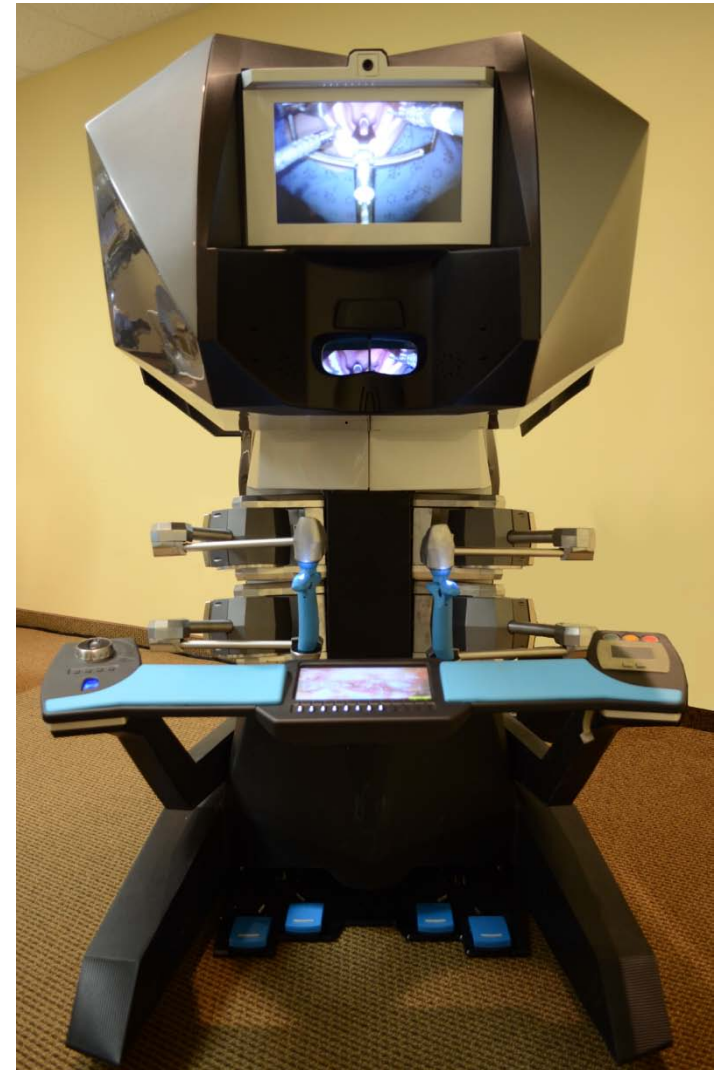


Cutting-Edge Communication Capabilities

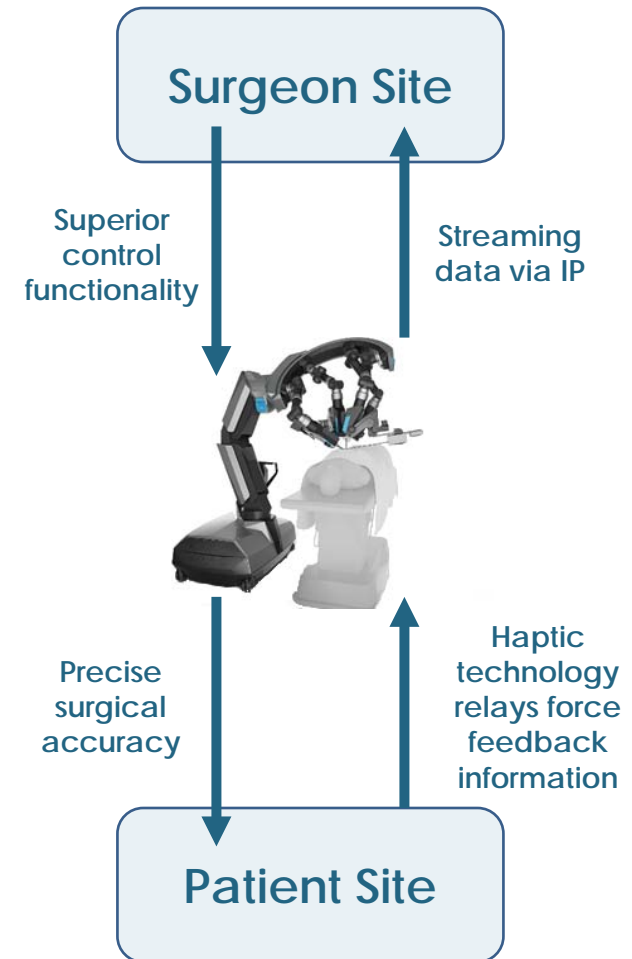
- Titan's advanced communication solutions enable operation on an Internet Protocol

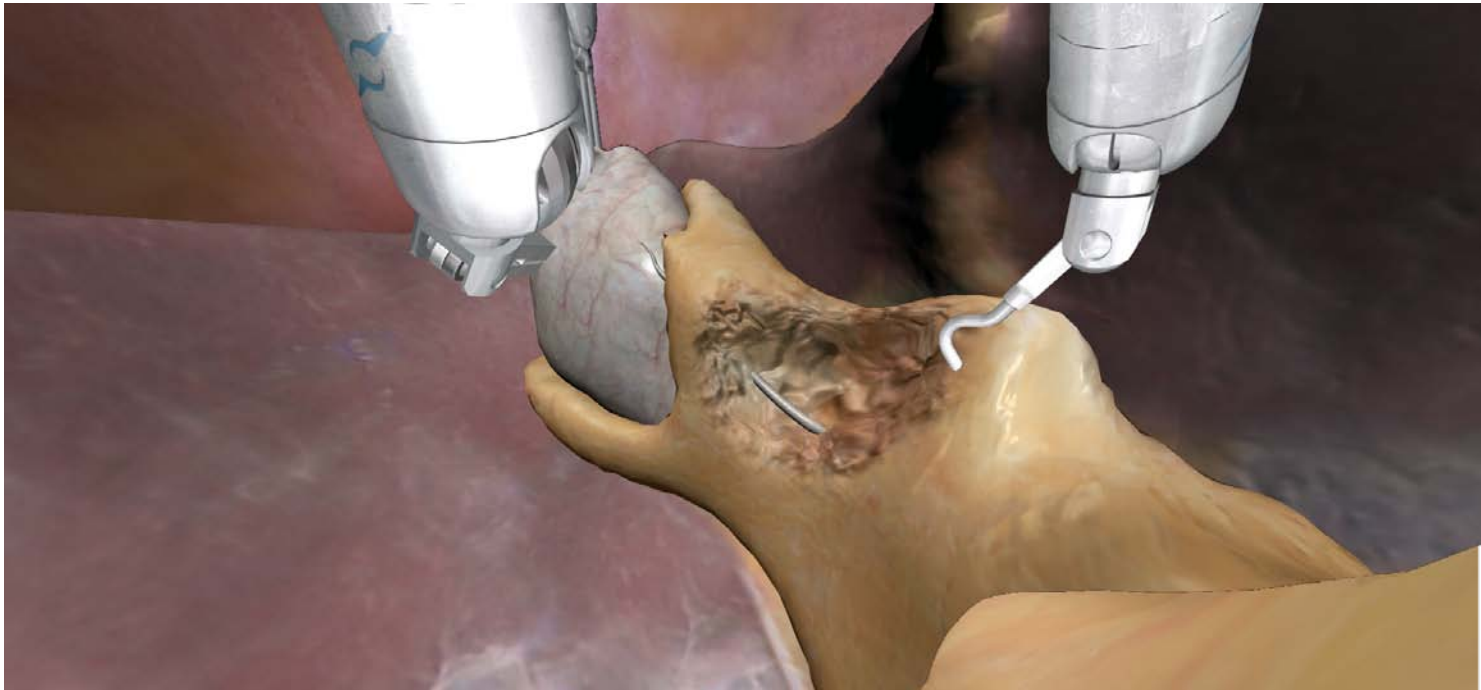


- 1080p 3D HD vision allows surgeons to see anatomy with better resolution and more viewing angles
- Advanced vision system for the operating surgeon increase safety of the patient



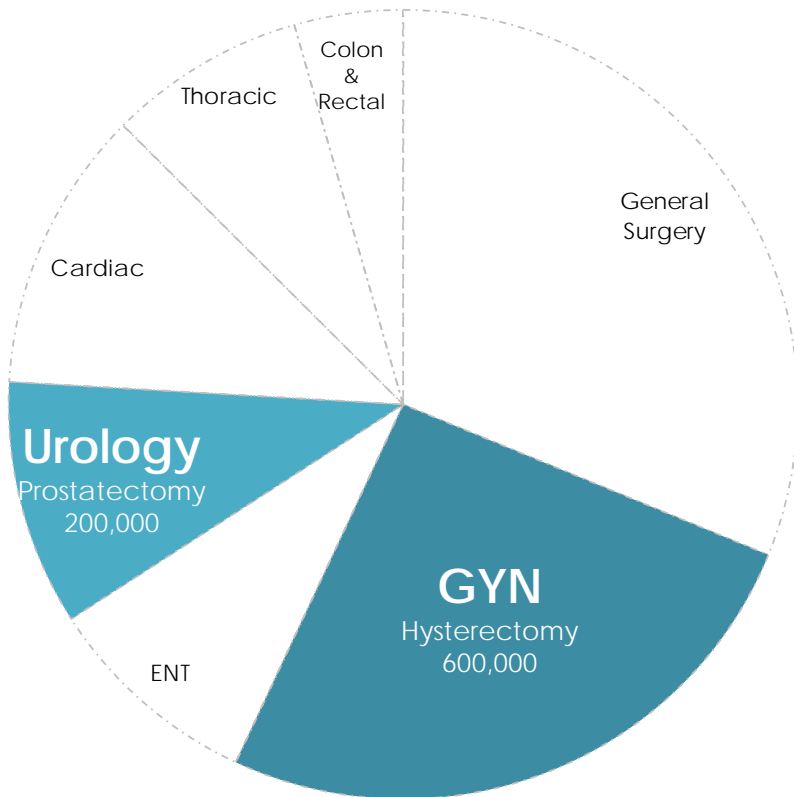
- Superior control and feedback increase operator precision and accuracy
- Force feedback (haptics)
 - Specially designed sensors
 - New type of motor feedback system
 - Offers quicker and more intuitive feedback
- Provides a better tactile feel when suturing



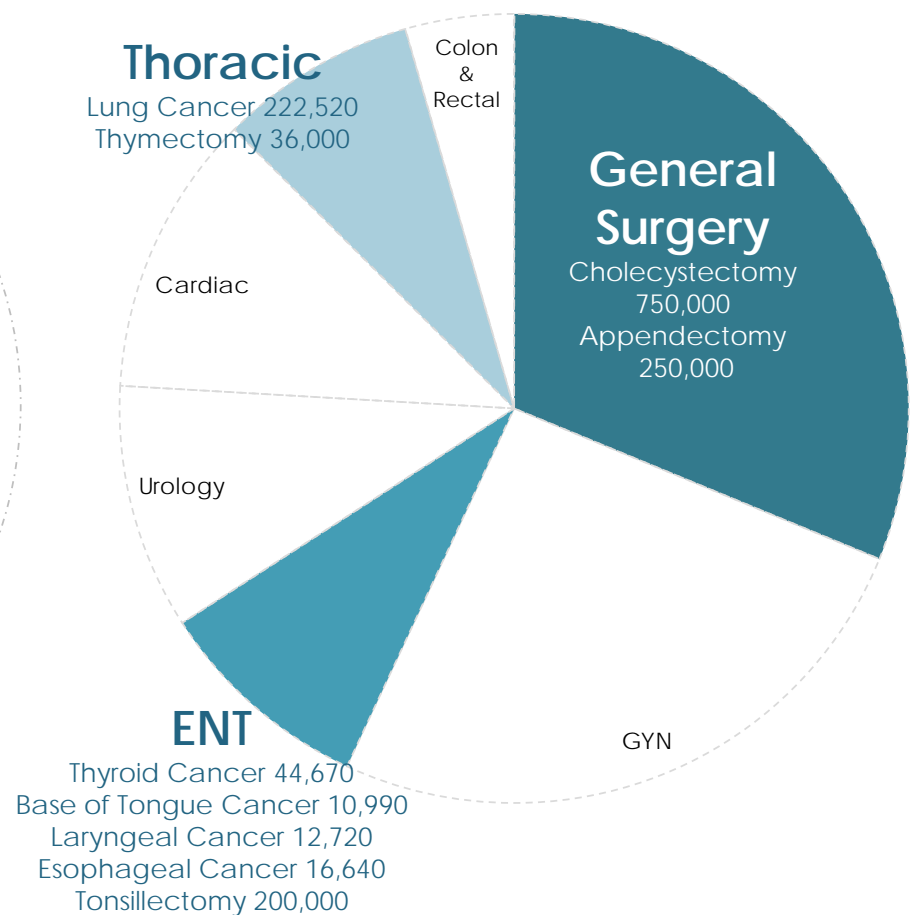


- Advanced technology requires greater attention to initial and recurrent training
- Surgeon error rates rise when not tasked with frequent robotic cases (5x or more)
- Academic centers are focused on simulation training for the future of surgery

Currently Addressed Market



Titan Opportunity

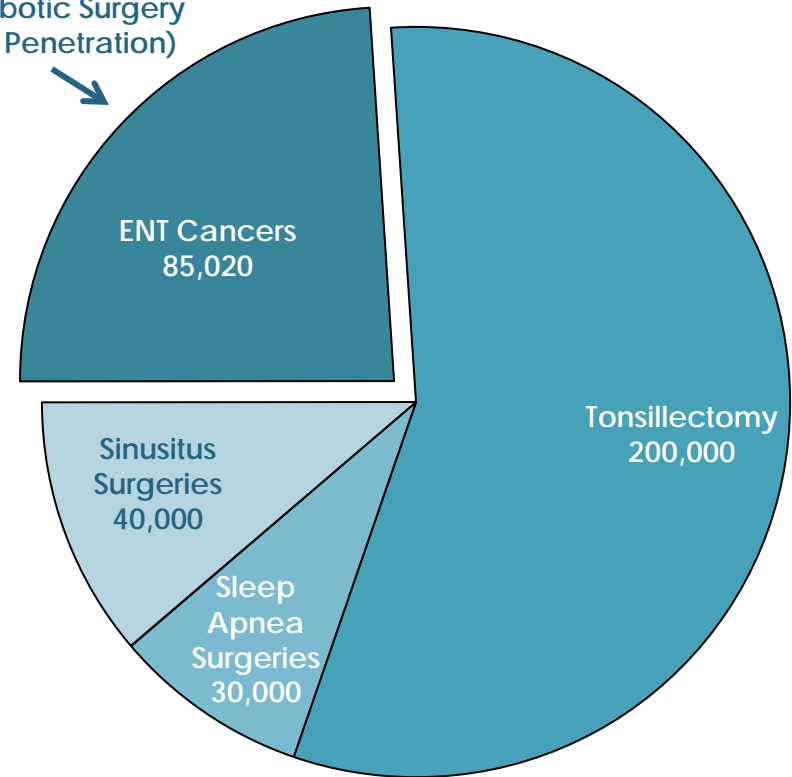


Source: American Cancer Society, public company filings

Understanding the ENT Opportunity

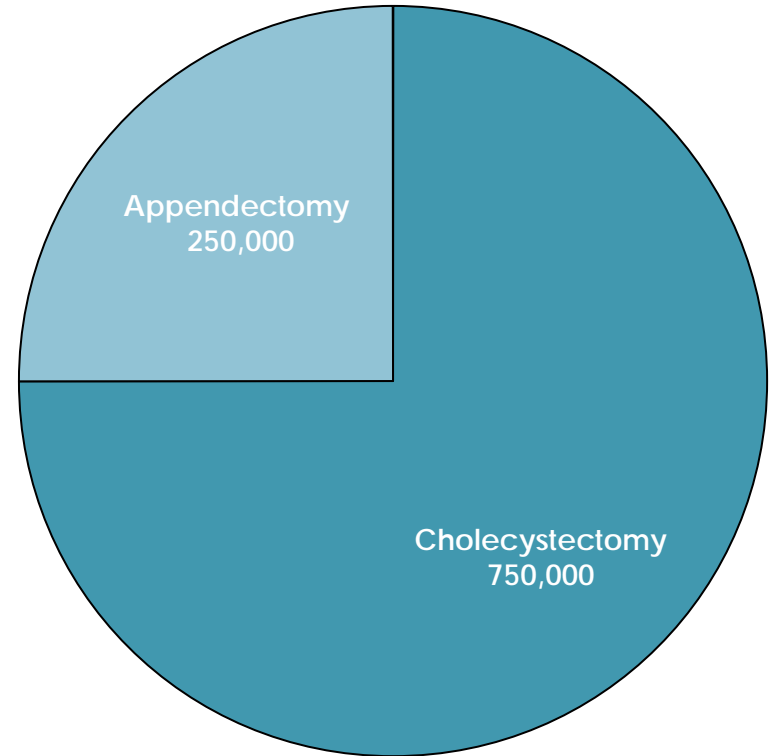
- Limitations of current treatment methods:
 - High morbidity in open surgery
 - Chemoradiation side effects
 - Transoral laser microsurgery (TLM) challenged by instrument limitations and line of sight issues
- Current robotic systems are not suited for broad ENT opportunity due to “small spaces” limitations

Early Adoptions and Gaining Momentum for Robotic Surgery (~5% Penetration)



Understanding The General Surgery Opportunity

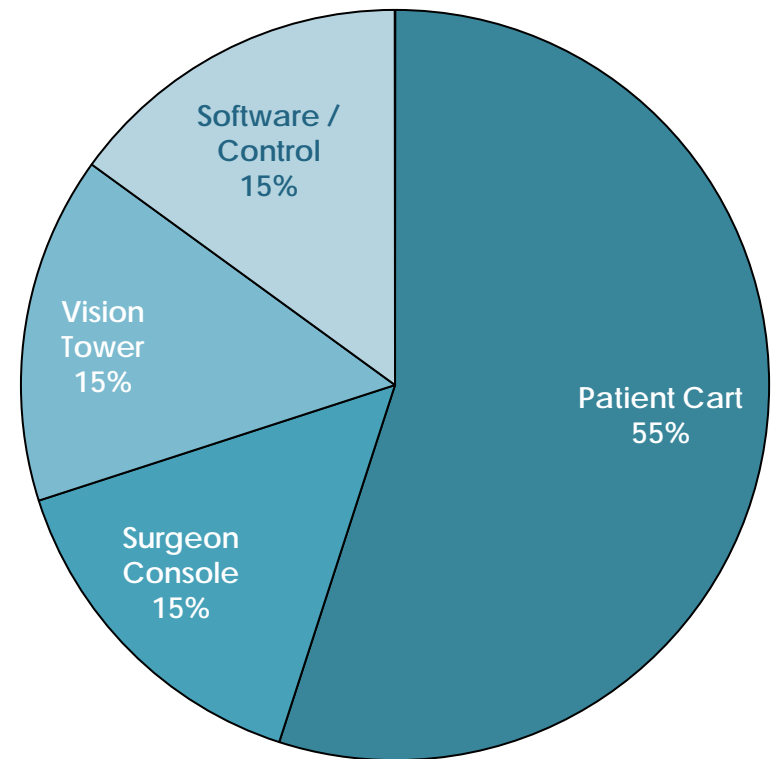
- Initially target cholecystectomies via a single port strategy
- Limitations of current procedures:
 - Technically challenging beyond cholecystectomy
 - Poor ergonomics
- Robotic surgery has the potential to overcome existing technical limitations



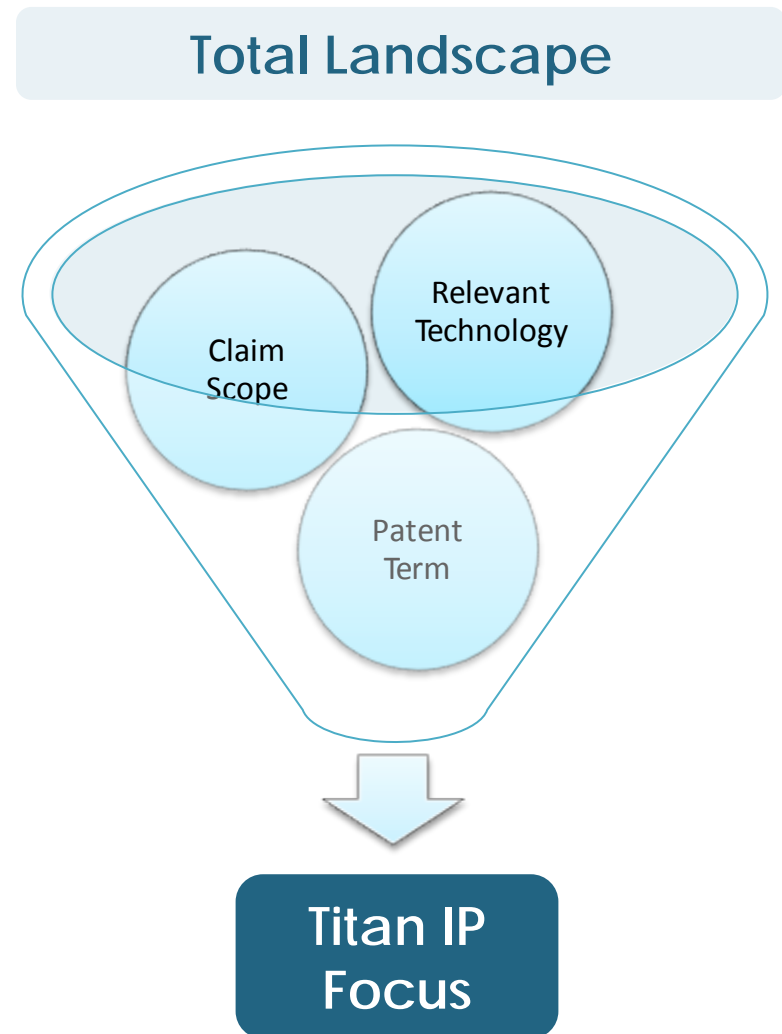
Sources: The Society for Surgery of the Alimentary Tract, The Annals of Surgery

- Ownership of 3 U.S. patents on ancillary robotic surgery technology
- Ownership or exclusive rights to 12 patent applications (U.S. and foreign)
- 2012 target: 12 patent applications

Anticipated Patent Portfolio Share



- Large volume of U.S. patents and pending applications
- The Company is conducting patent landscape searches and analysis
- In view of patent landscape, the Company is focusing on
 - Difference in technology
 - Patent claim scope
 - Patent term
- As Amadeus Composer components are finalized, the Company will conduct Freedom-to-Operate analysis
- Design and re-design of various components as necessary



No IP Protection*

Several countries
with no patent protection

100+ robotic systems installed
in these countries†

Countries include
major developing nations and
some European countries

Limited IP Protection**

Limited due to:
Reduced number of patents
Shorter patent terms

Some European countries and
other countries including Canada
and Australia have limited
protection

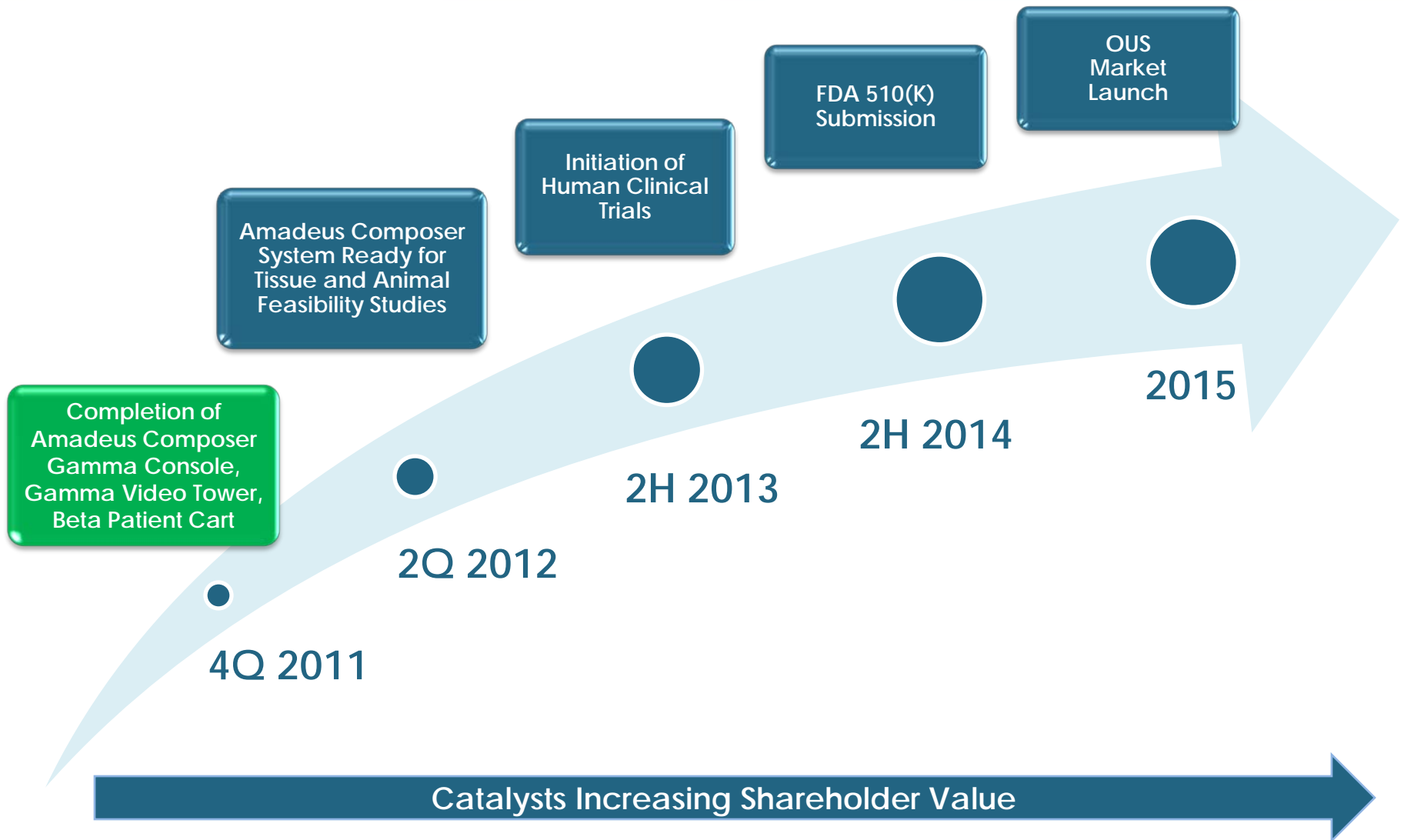
No general robotic surgery patents
in China and South Korea

* Countries where no robotic surgery patents have been discovered based on search and analysis to date

** Countries with limited robotic surgery patents based on search and analysis to date

† Based on *da Vinci* installed base as of ISRG Q2 2011

Established and Well Defined Development Plan



Development Partners



Clinical Sites



Children's Hospital Boston



- High recurring revenue to be generated by disposable components
- Strong profit margins
- Proven business model in the market

Targeting new surgical specialties where its robotic solution provides clear competitive advantages

Promote Amadeus Composer to Leading Surgeons and Hospitals

Surgical Console Based
Training and Simulation

Patient Education

Surgeon Testimonies



Market in USA, Europe, Asia Through
Distribution Agreements or Direct Sales



Sell Systems to Hospitals



Ticker symbol	TMD (TSX Venture)
Share price (November 28, 2011)	\$1.92
Cash and cash equivalents (September 30, 2011)	\$8.3 Million
Current burn rate (September 30, 2011)	\$2,000,000 – 2,250,000 per month
Shares outstanding (September 30, 2011)	57,431,175 (59,472,132* FD)
Market value (November 28, 2011)	\$110,267,856 (\$114,186,493* FD)
Security offerings:	
• June 2011	5,577,500 units (\$9,202,875 gross proceeds)
• Dec. 2010	5,000,000 units (\$8,250,000 gross proceeds)
Management ownership (September 30, 2011)	18.3%
Analyst coverage	Paradigm Capital

* Fully diluted includes an additional 2,882,404 options, 5,000,000 warrants (@\$1.85 expiring December 10, 2015) and 5,577,500 warrants (@\$2.00 expiring June 10, 2016) under the Treasury Stock Method.

Name & Position	Background
Craig Leon, MBA CEO	<ul style="list-style-type: none"> • CFO & COO, Redwood Asset Management, 2003-2009 • GenereX Biotechnology Corp., 2000-2003 • Co-Founder, MiFund.com, 1999-2000
Reiza Rayman, MD, PhD President	<ul style="list-style-type: none"> • Clinical research in robotic surgery since 1998 • Collaborated in world's first endoscopic robotic coronary artery bypass (1999) • North America's first surgical telementoring • Obtained \$30M grant for robotic surgery • Author and co-author of more than 20 publications on robotic surgery
Stephen Randall, CGA CFO	<ul style="list-style-type: none"> • Served as an auditor, CFO, corporate controller and accountant for several public and private companies and government organizations • Experience in tax planning/compliance, M&A, IT & operations
Joe Talarico, JD VP, Bus. Development	<ul style="list-style-type: none"> • Various positions with Intuitive Surgical Inc., including Area Training Director, Clinical Sales Manager, Area Sales Manager and Clinical Sales Representative (2004-2009) • Territory Manager for U.S. Surgical Corporation training and selling laparoscopic equipment (2003-2004)
John Valvo, MD VP, Medical Affairs	<ul style="list-style-type: none"> • Chief of Urology and Executive Director of Robotic and Minimally Invasive Surgery at Rochester General Hospital in Rochester, NY • Founder of the robotic program at Rochester General Hospital • Has performed over 600 robotic prostatectomies

Name	Background
Douglas Boyd, MD	<ul style="list-style-type: none"> Completed world's first robotic beating heart cardiac bypass surgery Director of Robotics & Professor of cardiothoracic surgery at UC Davis
Bob Kiaii, MD	<ul style="list-style-type: none"> Research activity includes robotic-assisted cardiac surgery, harvesting of arterial conduits for MIS and robotic cardiac surgery
Hiep Thieu Nguyen, MD	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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
Louis Eichel, MD	<ul style="list-style-type: none"> Extensive background in researching the clinical aspects of surgical robotics and surgical simulation Currently practices in Rochester, NY and is a Clinical Assistant Professor of Urology at the University of Rochester
Po N. Lam, MD	<ul style="list-style-type: none"> Specializes in oncologic robotic and laparoscopic surgery in Central New York Has performed over 500 robotic surgeries since 2006
Carlo Camargo Passerotti, MD, PhD	<ul style="list-style-type: none"> 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

Name

Background

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

Balasubramanian Sivakumar, MD

- Vice President of St. Joseph's Hospital Health Center in Syracuse, NY 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

- Rapidly growing global robotic surgical market
- Targeting new surgical specialties where Titan's robotic solution provides clear competitive advantages
- Established and well defined development plan
- Differentiated technology with growing IP portfolio
- Attractive financial model – “Razor / Razorblade”
- Highly experienced management team and medical advisors