



# Investor Presentation

TSX: TMD | OTCQB: TITXF

January 2018

# Forward Looking Statements

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 SPORT™ 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 in respect of the fiscal year ended December 31, 2016 and other information contained in the Company's public filings (which may be viewed at [www.sedar.com](http://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.



# Titan Medical Overview

Designer and developer of the **SPORT Surgical System**, a versatile single-incision platform that is intended to address an underserved segment of the multibillion-dollar\* market for abdominal surgeries performed using robotic technology.

Designed for improved clinical performance,  
operating room efficiency and hospital economics.



# Leadership Team

**David J. McNally**  
President, CEO & Director

Founder, President, CEO & Chairman Domain Surgical Inc.; developer, manufacturer, marketer of advanced energy surgical platform, merged with OmniGuide in 2016. Co-founder, President & CEO ZEVEX International Inc. (NASDAQ: ZVXI); developer, manufacturer, marketer of award-winning medical devices, acquired by MOOG Inc. in 2007. Bachelor of Science in mechanical engineering from Lafayette College, MBA from the University of Utah, co-inventor on 30+ U.S. and international patents.

**Stephen Randall, CPA,  
CGA, CFO & Director**

30+ years of executive experience in established and start-up companies including accounting, finance, capital markets, tax planning, compliance, IT management, mergers & acquisitions and operations. Bachelor of Arts in political science from the University of Western Ontario, Commerce Degree from the University of Windsor.

**Perry Genova**  
SVP of R&D

Expert in in medical device product development including surgical robotics, author of 32 peer-reviewed papers, inventor of 30 U.S. Patents + 24 patents pending. PhD in biomedical engineering from the University of North Carolina at Chapel Hill, Bachelor of Science in electrical engineering from the University of North Carolina at Charlotte.

**Curtis Jensen**  
VP of Quality & Reg. Affairs

20+ years of experience leading quality and regulatory affairs teams at established and start-up U.S. companies to achieve quality systems compliance, 510(k) clearances, and CE Mark approvals. Master of Science in applied mathematics from Johns Hopkins University, Bachelor of Science in electrical engineering from Utah State University.

**Sachin Sankholkar**  
VP of Marketing

20+ years of advanced medical device marketing experience, including 15 years at Intuitive Surgical Inc. developing robotic surgeon network and procedural expertise in multiple subspecialties. Master of Science in biomedical engineering from Drexel University, MBA from the University of Southern California.

**Chris Seibert**  
VP of Business Development

12+ years of advanced medical device sales and management experience, including 10 years at Intuitive Surgical Inc. and Stereotaxis Inc. with IDN/GPO sales channel expertise and C-level access and network. Bachelor of Arts from the University of Alabama, Master of Arts in human relations from the University of Oklahoma, MBA from the University of South Alabama.



# Evolution of Surgical Care

## Open Surgery

- Open surgery offers broad application
- Requires significant hospital stay and recovery time
- Risk of adverse events

## Minimally Invasive Surgery

- Minimally Invasive Surgery (MIS) has been a growing trend over the past 25 years
- Reduced hospitalization time
- Reduced risk of adverse events
- Requires highly skilled surgeons

## Robotic Surgery

- Robotic surgery further expands upon the benefits of MIS
- Global robotic procedures have grown from 1,000 procedures in 2000 to 753,000\* in 2016
- **Technology remains expensive with procedural and operational limitations**

\* Source: Intuitive Surgical Inc. press release to announce preliminary fourth quarter and full year 2016 results



# Today's Robotic Surgery Environment

Robotic technology was introduced to mitigate the risks of MIS, reduce variations in procedural efficiency and improve consistency of patient outcomes.

## Benefits

- + Increased Dexterity
- + Improved Visualization (3D)
- + Improved Ergonomics

## Challenges

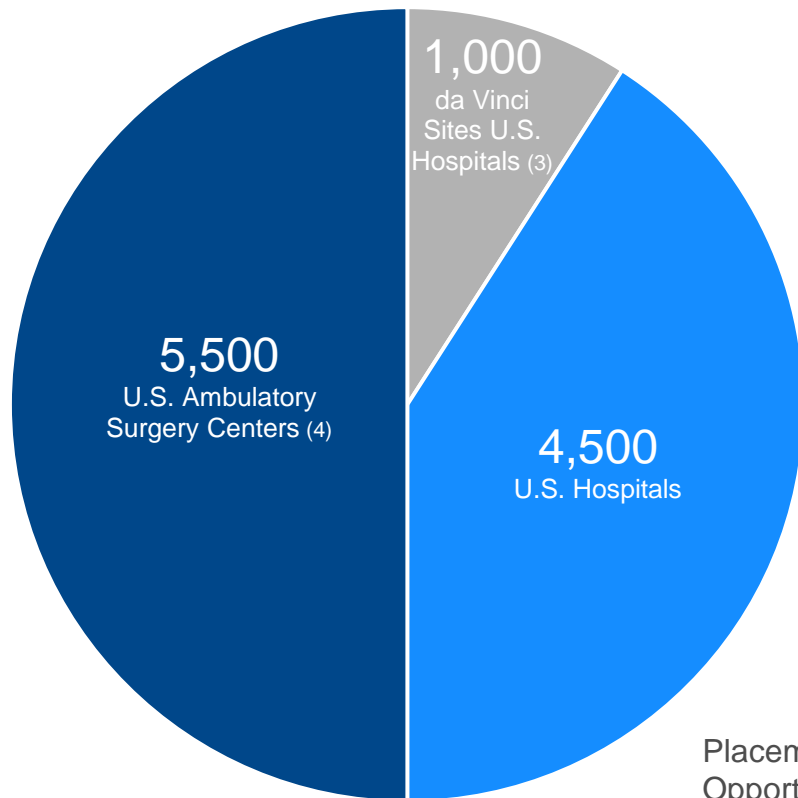
- High Cost of Entry
- Large Physical Footprint
- High Level of Training
- Increased Cost For Each Procedure
- Reduced Operational Efficiency (long setup time)
- Low ROI for Hospitals
- Limited Procedural Capability



# \$12B+

## U.S. Capital Revenue Opportunity

10,000 New Placement  
Opportunities<sup>(1,2)</sup>



Placement  
Opportunities

(1) Based on estimate of 1 system per hospital at \$1.25M per system plus accessories

(2) Registered U.S. Hospitals Source: <http://www.aha.org/research/rc/stat-studies/fast-facts.shtml>

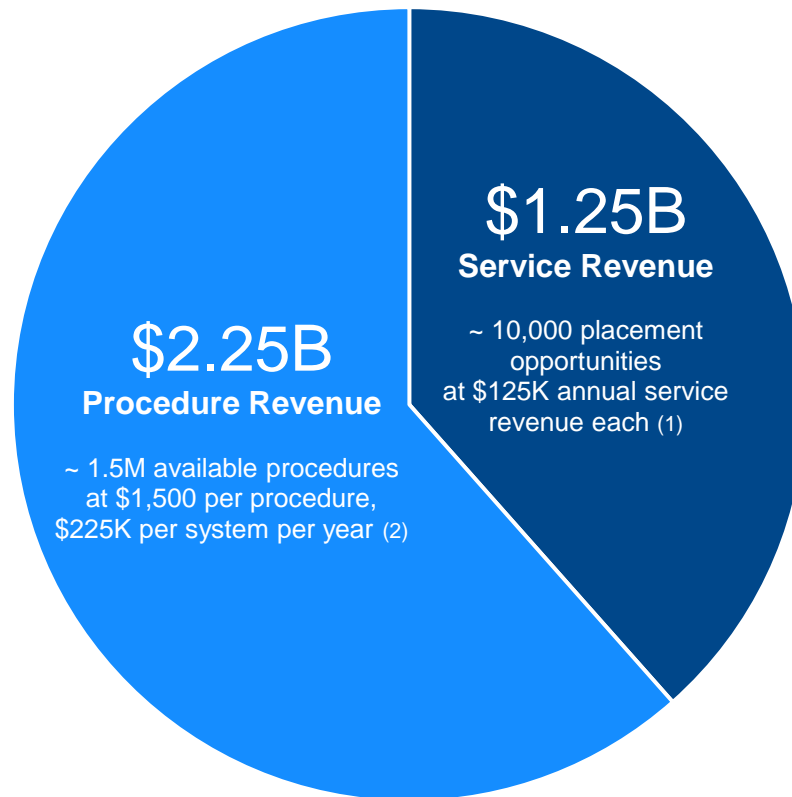
(3) Intuitive Surgical da Vinci U.S. Hospitals Source: <http://davincisurgeonlocator.com/>

(4) Ambulatory Surgery Centers Source: <http://www.ascassociation.org/advancingsurgicalcare/whatisanasc/numberofascspersstate>



# \$3.5B U.S. Annual Recurring Revenue Opportunity

For Service and  
Consumables



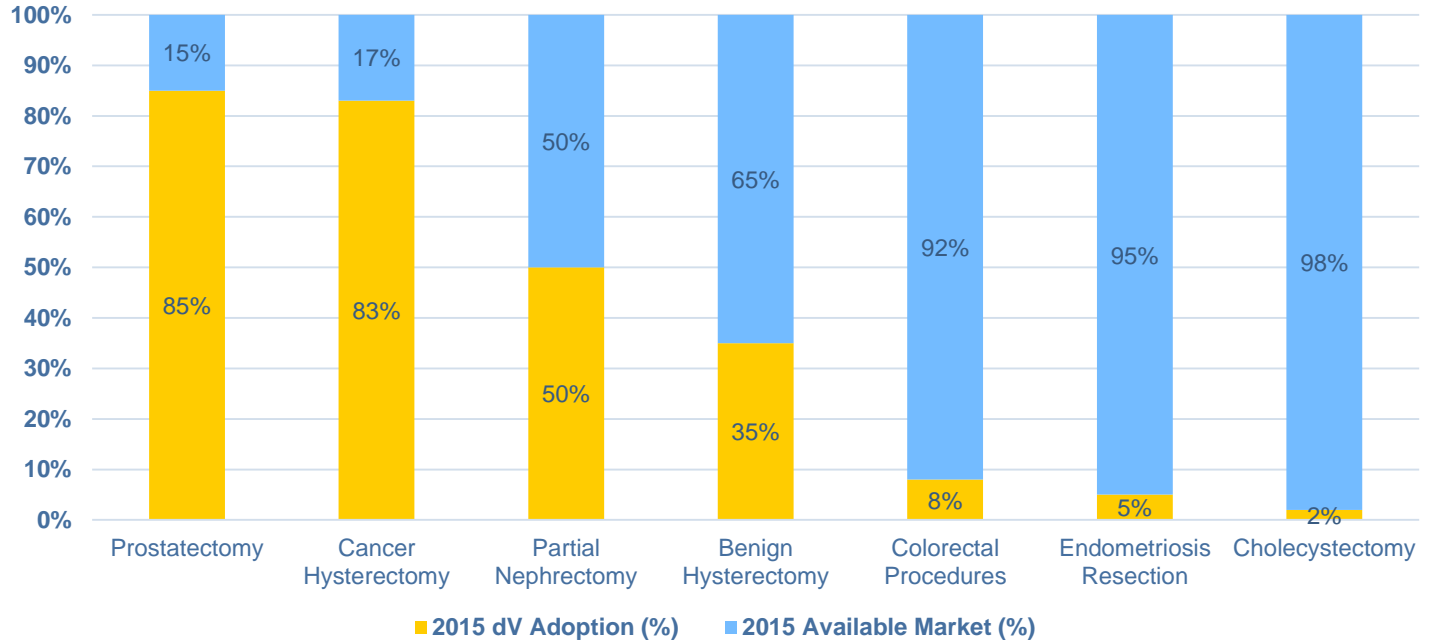
- (1) \$125,000 of annual service revenue per system after year 1
- (2) \$1,500 per procedure revenue, assuming 150 procedures per placement per year





**1.6M**  
U.S. Annual  
Available  
Procedure  
Market<sub>(1)</sub>

Available Market (%) for Select Procedures (Data as of 2015)



(1) da Vinci (dV) U.S. procedure adoption data as of 2015 per Intuitive Surgical Inc. Investor Presentation



# SPORT Surgical System

- Versatile single-port robotic surgery solution
- Overcomes multi-port robotic surgery limitations
- Engineered for performance, efficiency and cost-effectiveness
- Expected to provide access to underserved market segments, such as ambulatory surgery centers



# Technology Differentiation

Engineered for Simplicity and Efficiency



## Single-Incision

With a single incision made around the umbilicus, the result can be near-scarless surgery



## Small Footprint

Enhanced mobility and ease-of-use leads to quicker deployment in multiple ORs and higher utilization



## Multi-Articulating

Single-use end-effectors on reusable multi-articulating instrument arms result in optimal and economical device performance in every procedure



## Open Display

3D high-definition display offers the perfect balance of surgical immersion and situational awareness in the OR



## Ergonomic Workstation

Highly ergonomic workstation with natural handle interface enables comfortable surgical posture, even during long procedures



## Purposeful Design

Designed from the ground up to improve:

**Clinical Capabilities**

**OR Efficiency**

**Hospital Economics**



# SPORT Workstation



- Ergonomically focused design
- Natural multi-articulated handle interface
- Open, unobtrusive 3D high-definition display platform
- Multi-configurable elbow rest and foot pedal positioning
- Easily maneuverable with swiveling easy-gliding coasters
- Small footprint



# SPORT Patient Cart



- Single-arm configuration with no external moving parts facilitates simple setup and assistant-friendly surgery
- Single-incision enables swift multi-quadrant positioning
- Easy to load and unload instruments through Camera Insertion Tube (CIT)
- Compact, rollers enable mobility
- Convenient to maneuver and position
- Minimal cable management in OR



# SPORT CIT and Instruments

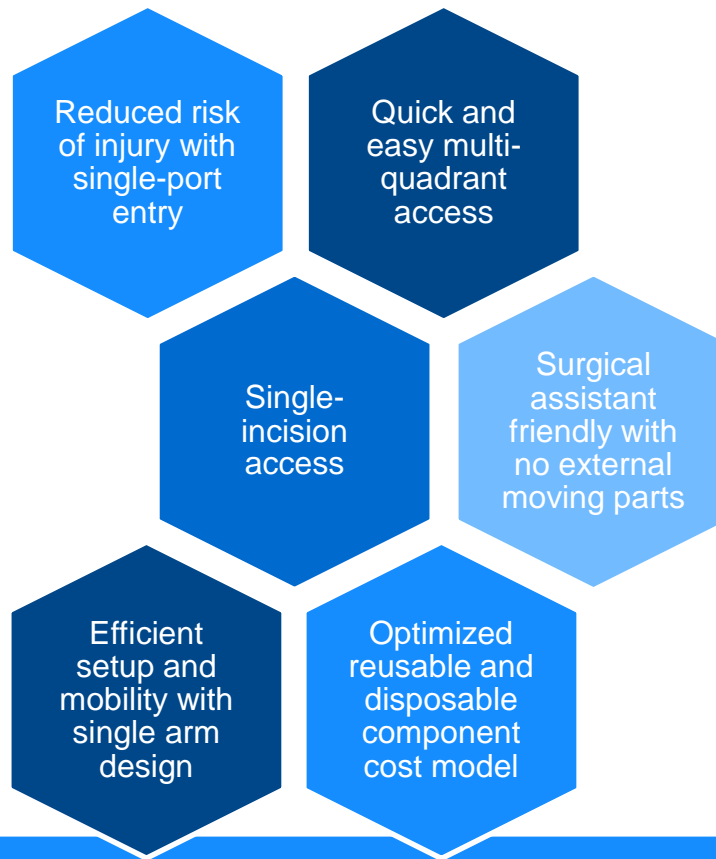


- Camera Insertion Tube (CIT) includes 3D camera, laser light source, and accommodates two multi-articulating instruments
- Variety of multi-use instruments with single patient use end effectors for grasping, suturing, cutting and coagulation
- Efficient multi-quadrant access with repositioning of CIT
- Open architecture for adaptation of future end effectors and functions



Single-Incision  
Surgery + Enhanced  
Robotic Technology

# Optimal Patient Care



SPORT Surgical System is designed to provide surgeons with multi-articulated instruments in a triangulated configuration through a single-incision.



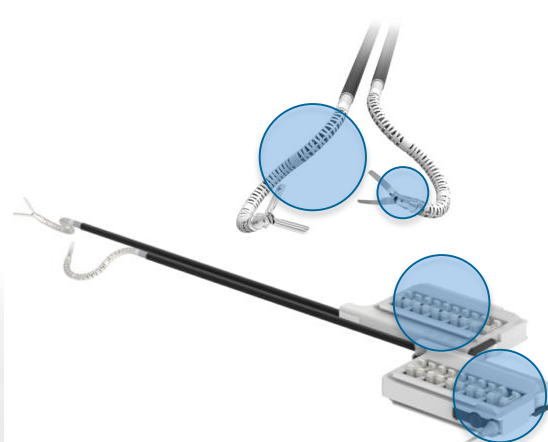
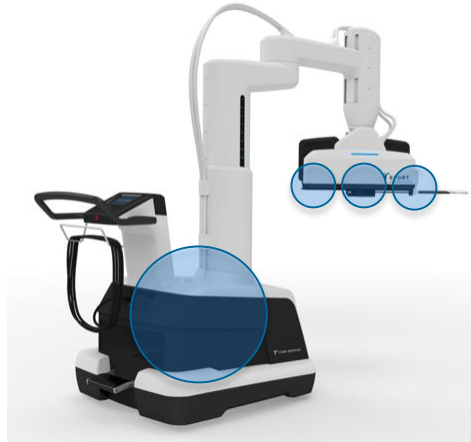
# Intellectual Property

The SPORT Surgical System is a unique single-incision robotic surgical system that has been developed based on clinical user requirements

20 Patents

47 Applications

Areas of the SPORT Surgical System covered by patents or pending applications:





# Plan for Commercialization\*

**2017** ➤

Initiated human factors, advanced design, development and preclinical studies

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**2018** ➤

Development, tooling, preclinical studies, regulatory submission preparation and application

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**2019** ➤

Projected regulatory clearance and approvals, commercialization in U.S. and Europe with limited release

\*Based on management's current estimates.



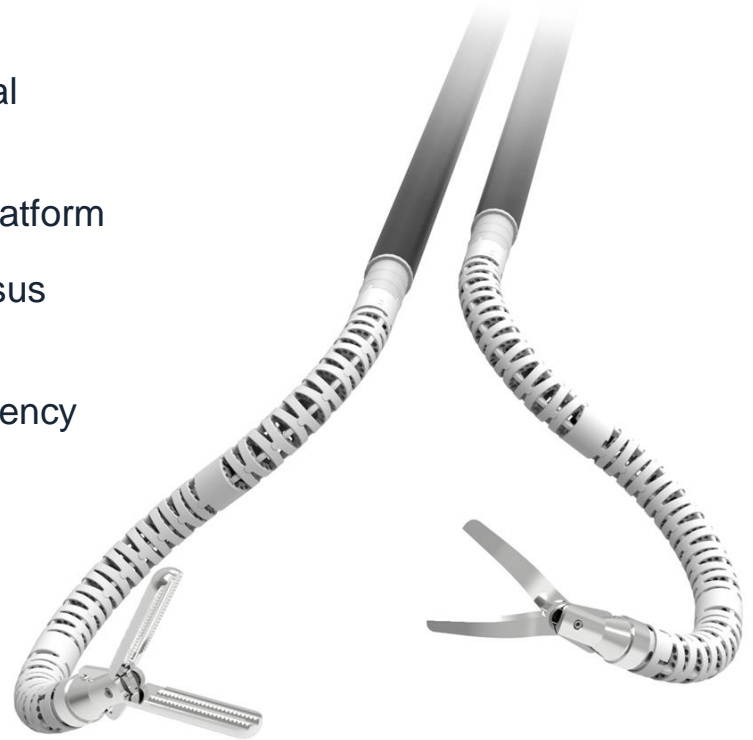
# 2017 Accomplishments

- Recruited qualified VP of Research & Development, VP of Quality & Regulatory Affairs
- Assessed product development program, established 2017-2018 milestones
- Resumed product development and human factors studies following surgeon interviews
- Finalized user requirements for first-generation SPORT
- Issued Patents:
  - U.S. Patent No. 9,629,688, “Actuator and Drive for Manipulating a Tool”
  - European Patent No. EP2996613, “Articulated Tool Positioner and System Employing Same”
  - Canadian Patents CA2973227 and CA2973235 related to control methods for robotic surgical systems
- Established Centers of Excellence in U.S. and Europe and completed initial preclinical SPORT studies
  - Florida Hospital Nicholson Center in Orlando
  - Columbia University Medical Center in New York City
  - Institut Hospitalo-Universitaire de Strasbourg, France
- Secured USD \$45M in financing through series of Canadian and U.S. public and private offerings, including a U.S. surgeon-led private placement



# Summary

- Targeting underserved segment of multibillion-dollar global robotic surgery market
- Highly versatile, differentiated advanced single-incision platform
- Potential benefits to patients, surgeons and hospitals versus competitive offerings
- Engineered for clinical performance, operating room efficiency and hospital economics
- Attractive capital and recurring revenue model
- Experienced management team with record of success





Thank You

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