



# VICARIOUS SURGICAL

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INVESTOR PRESENTATION AUGUST 2024



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This presentation includes “forward-looking statements” within the meaning of the “safe harbor” provisions of the United States Private Securities Litigation Reform Act of 1995. The company’s actual results may differ from its expectations, estimates, and projections and, consequently, you should not rely on these forward-looking statements as predictions of future events. All statements other than statements of historical facts contained herein are forward-looking statements that reflect the current beliefs and expectations of management. These forward-looking statements involve significant risks and uncertainties that could cause the actual results to differ materially from those discussed in the forward-looking statements. Most of these factors are outside Vicarious Surgical’s control and are difficult to predict. Factors that may cause such differences include, but are not limited to: the ability to recognize the benefits of Vicarious Surgical’s business combination, which may be affected by, among other things, competition and its ability to grow and manage growth profitably and retain its key employees; the ability to maintain the listing of Vicarious Surgical’s Class A common stock on the New York Stock Exchange; the success, cost and timing of Vicarious Surgical’s product and service development activities; the commercialization and adoption of Vicarious Surgical’s initial product candidates and the success of Vicarious Surgical’s single-port surgical robot, called the Vicarious Surgical System, and any of Vicarious Surgical’s future product candidates and service offerings; the potential attributes and benefits of the the Vicarious Surgical System and any of Vicarious Surgical’s other product and service offerings once commercialized; Vicarious Surgical’s ability to obtain and maintain regulatory authorization for the the Vicarious Surgical System and its product and service offerings, and any related restrictions and limitations of any authorized product or service offering; changes in U.S. and foreign laws; Vicarious Surgical’s ability to identify, in license or acquire additional technology; Vicarious Surgical’s ability to maintain its license agreements and manufacturing arrangements; Vicarious Surgical’s ability to compete with other companies currently marketing or engaged in the development of products and services for use in ventral hernia repair procedures and additional surgical applications; the size and growth potential of the markets for the the Vicarious Surgical System and any of Vicarious Surgical’s future product and service offerings, and its ability to serve those markets once commercialized, either alone or in partnership with others; Vicarious Surgical’s estimates regarding expenses, future revenue, capital requirements and needs for additional financing; Vicarious Surgical’s ability to raise financing in the future; Vicarious Surgical’s financial performance; Vicarious Surgical’s intellectual property rights and how failure to protect or enforce these rights could harm its business, results of operations and financial condition; economic downturns and political and market conditions beyond the control of Vicarious Surgical and their potential to adversely affect Vicarious Surgical’s business, financial condition and results of operations; the anticipated continued impact of the COVID-19 pandemic on Vicarious Surgical’s business; and other risks and uncertainties indicated from time to time in Vicarious Surgical’s filings with the SEC. Vicarious Surgical cautions that the foregoing list of factors is not exclusive. The company cautions readers not to place undue reliance upon any forward-looking statements, which speak only as of the date made. Vicarious Surgical does not undertake or accept any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements to reflect any change in its expectations or any change in events, conditions or circumstances on which any such statement is based.

All surgical images contained within this presentation are sourced from cadaveric procedures.



# KEY INVESTMENT HIGHLIGHTS



GROWING \$150B MARKET THAT IS 96% UNPENETRATED BY ROBOTIC SURGERY<sup>1</sup> WITH STRONG EXISTING REIMBURSEMENT



UNPRECEDENTED PARTNERSHIPS WITH LEADING HEALTHCARE SYSTEMS<sup>2</sup>



PROPRIETARY DECOUPLED ACTUATOR TECHNOLOGY ENABLES UNPARALLELED FUNCTIONALITY



UNIQUE PLATFORM ARCHITECTURE DESIGNED FOR FUTURE AUTOMATED PATIENT PROTECTION<sup>3</sup>



[1] VICARIOUS SURGICAL ESTIMATES FROM DATA SOURCED FROM LSI MARKET SIZE ANALYSIS 2022 DATA AND PUBLIC FILINGS. ASSUMES \$3,319 REVENUE PER PROCEDURE CURRENTLY REALIZED BY LEGACY ROBOTIC COMPANY.

[2] PARTNERSHIPS FOR PURPOSE OF DEVELOPMENT, VERIFICATION AND VALIDATION, CLINICAL TRIALS, AND TRAINING

[3] INCLUDES ADDITIONAL FEATURES EXPECTED AFTER INITIAL LAUNCH AND NECESSARY REGULATORY APPROVAL OF THESE FEATURES. AUTOMATED PATIENT PROTECTION IS VICARIOUS SURGICAL'S TERM FOR A SET OF FUTURE FEATURES LEVERAGING THE ARCHITECTURE OF THE VICARIOUS SURGICAL PLATFORM, DESIGNED TO ENHANCE PATIENT SAFETY



# SURGERY TODAY

## \$150 Billion<sup>1</sup>

INITIAL MARKET OPPORTUNITY:

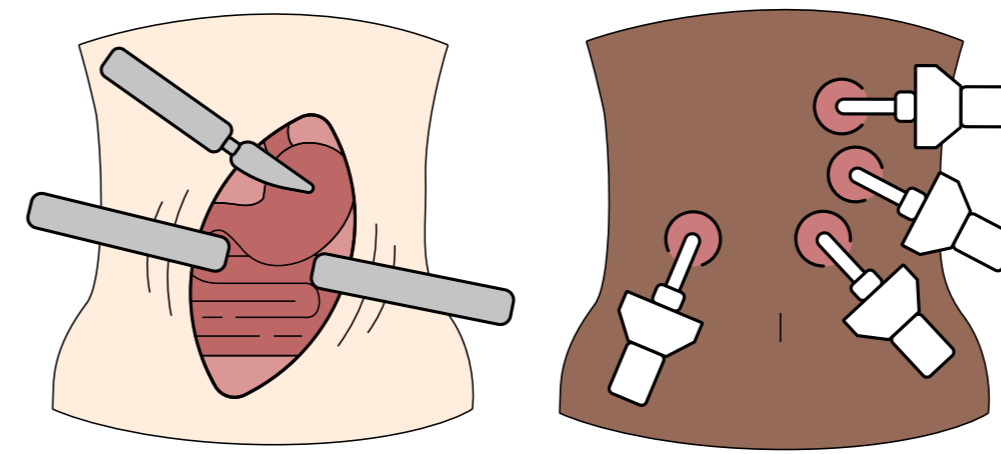
- HERNIA
- GALLBLADDER
- GASTROINTESTINAL
- GYNECOLOGY

## 45 Million Procedures<sup>2</sup>

ABDOMINAL ROBOTIC-  
ADDRESSABLE WORLDWIDE  
PER YEAR



## 96%<sup>1</sup> Manual



~4% ROBOTIC ADOPTION DUE TO:

- HIGH COST
- LIMITED ACCESS + CAPABILITY
- DIFFICULTY OF USE + TRAINING

## 1 in 3

PROCEDURES HAVE SURGICAL  
COMPLICATIONS<sup>3</sup>



[1] VICARIOUS SURGICAL ESTIMATES FROM DATA SOURCED FROM LSI MARKET SIZE ANALYSIS 2022 DATA AND PUBLIC FILINGS. ASSUMES \$3,319 REVENUE PER PROCEDURE CURRENTLY REALIZED BY LEGACY ROBOTIC COMPANY.

[2] VICARIOUS SURGICAL ESTIMATES FROM LSI MARKET DATA. 2022 DATA

[3] DHARAP SB, BARBANIYA P, NAVGALE S. INCIDENCE AND RISK FACTORS OF POSTOPERATIVE COMPLICATIONS IN GENERAL SURGERY PATIENTS. CUREUS. 2022 NOV 1;14(11):E30975. DOI: 10.7759/CUREUS.30975. PMID: 36465229; PMCID: PMC9714582.



01

# THE VICARIOUS SURGICAL SYSTEM



# THE SYSTEM

## OUR DECOUPLED TECHNOLOGY UNIQUELY BENEFITS THE PATIENT, SURGEON, AND HOSPITAL

- . MINIMALLY INVASIVE VIA 1.8CM SINGLE PORT<sup>1</sup>
- . ENHANCED DEXTERITY AND EXPANSIVE RANGE OF MOTION
  - . SHOULDERS, ELBOW, AND WRIST INTRA-ABDOMINAL
  - . 13 DEGREES OF FREEDOM PER ARM (INCLUDING 9 FROM WITHIN ABDOMEN)
- . 360° VISUALIZATION WITH 3D ANATOMICAL MAPPING AND REALTIME MULTIMODAL FLUORESCENT IMAGING<sup>2</sup>
- . UNPARALLELED SENSING OF FORCE AND POSITION

[1] VICARIOUS SURGICAL SYSTEM IS CAPABLE OF TROCAR SIZES AS LOW AS 1.2CM. CURRENT DISPOSABLES REQUIRE 1.8CM TROCAR.

[2] INCLUDES ADDITIONAL FEATURES EXPECTED AFTER INITIAL LAUNCH AND NECESSARY REGULATORY APPROVAL OF THESE FEATURES.

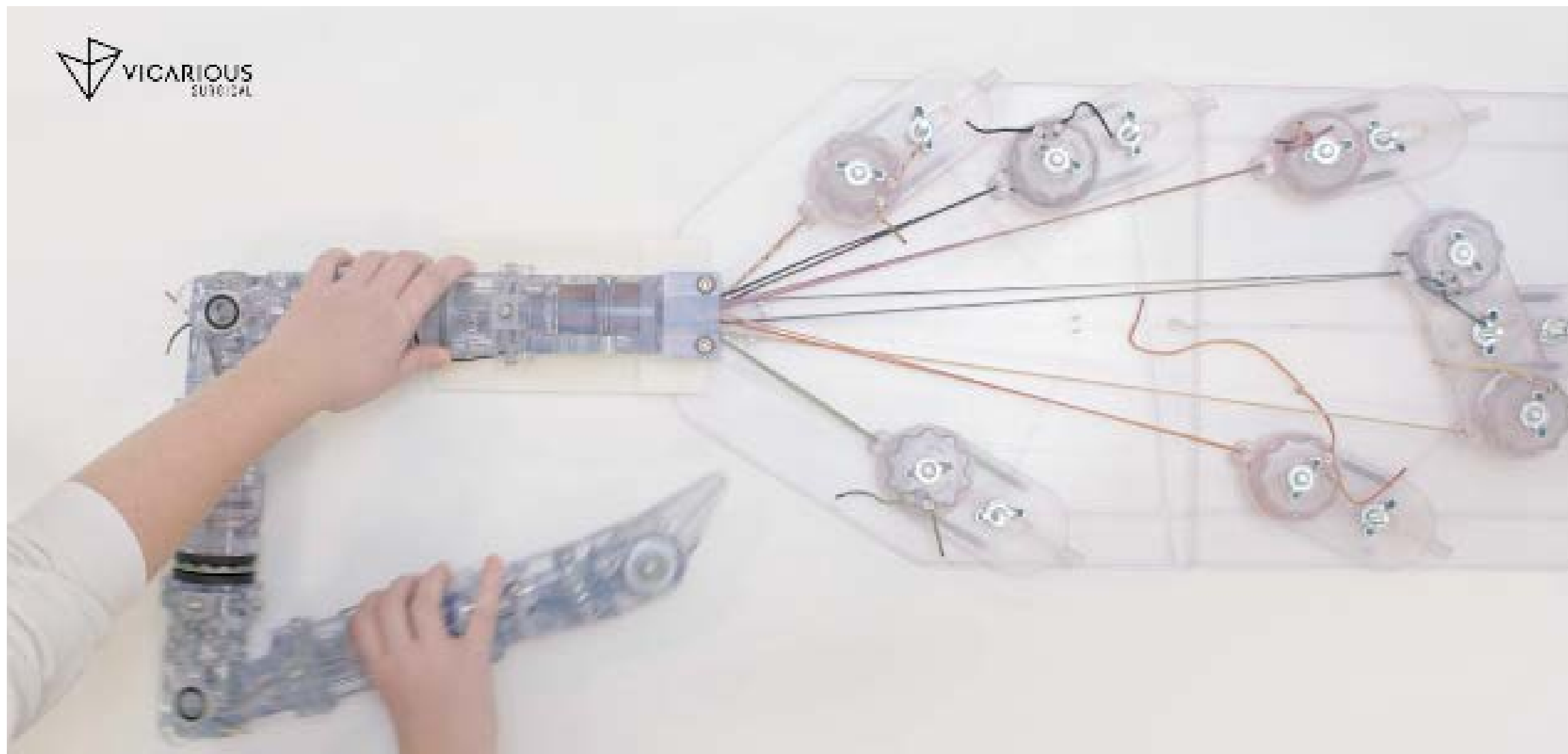




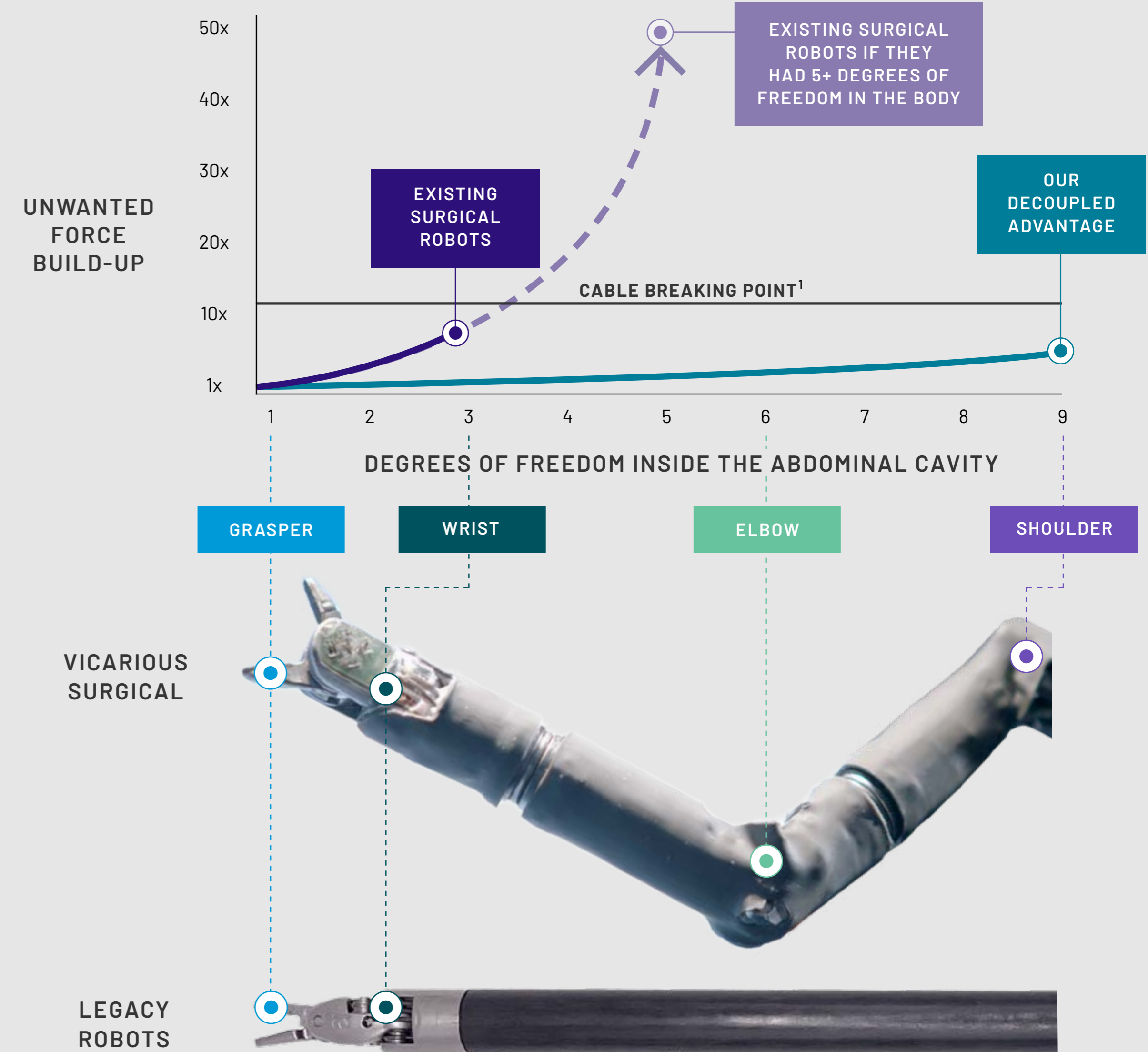
# DECOUPLED ACTUATORS: OUR ENABLING TECHNOLOGY

## PROPRIETARY TECHNOLOGY:

- ISOLATES CABLE PATHWAYS
- REMOVES BUILD UP OF FORCE BETWEEN JOINTS



[1] CHART BASED ON VICARIOUS SURGICAL ESTIMATES AND CALCULATIONS, CABLE BREAKING POINT IS APPROXIMATED. FRIEDMAN DC, LENDVAY TS, HANNAFORD B. INSTRUMENT FAILURES FOR THE DA VINCI SURGICAL SYSTEM: A FOOD AND DRUG ADMINISTRATION MAUDE DATABASE STUDY. SURG ENDOSC. 2013 MAY;27(5):1503-8. DOI: 10.1007/S00464-012-2659-8. EPUB 2012 DEC 14. PMID: 23242487. BORDEN LS JR, KOZLOWSKI PM, PORTER CR, CORMAN JM. MECHANICAL FAILURE RATE OF DA VINCI ROBOTIC SYSTEM. CAN J UROL. 2007 APR;14(2):3499-501. PMID: 17466155.





# ONE SMALL INCISION

## MINIMIZING PATIENT COMPLICATIONS THROUGH 1.8CM TROCAR<sup>1</sup>

- <2.0CM INCISION ABILITY TO UTILIZE OBTURATOR
- >2.0CM INCISION REQUIRES SCALPEL
- OBTURATOR DRIVES COMPLICATION RATES DOWN BY SEPARATING MUSCLE FIBERS RATHER THAN CUTTING



SCALPEL



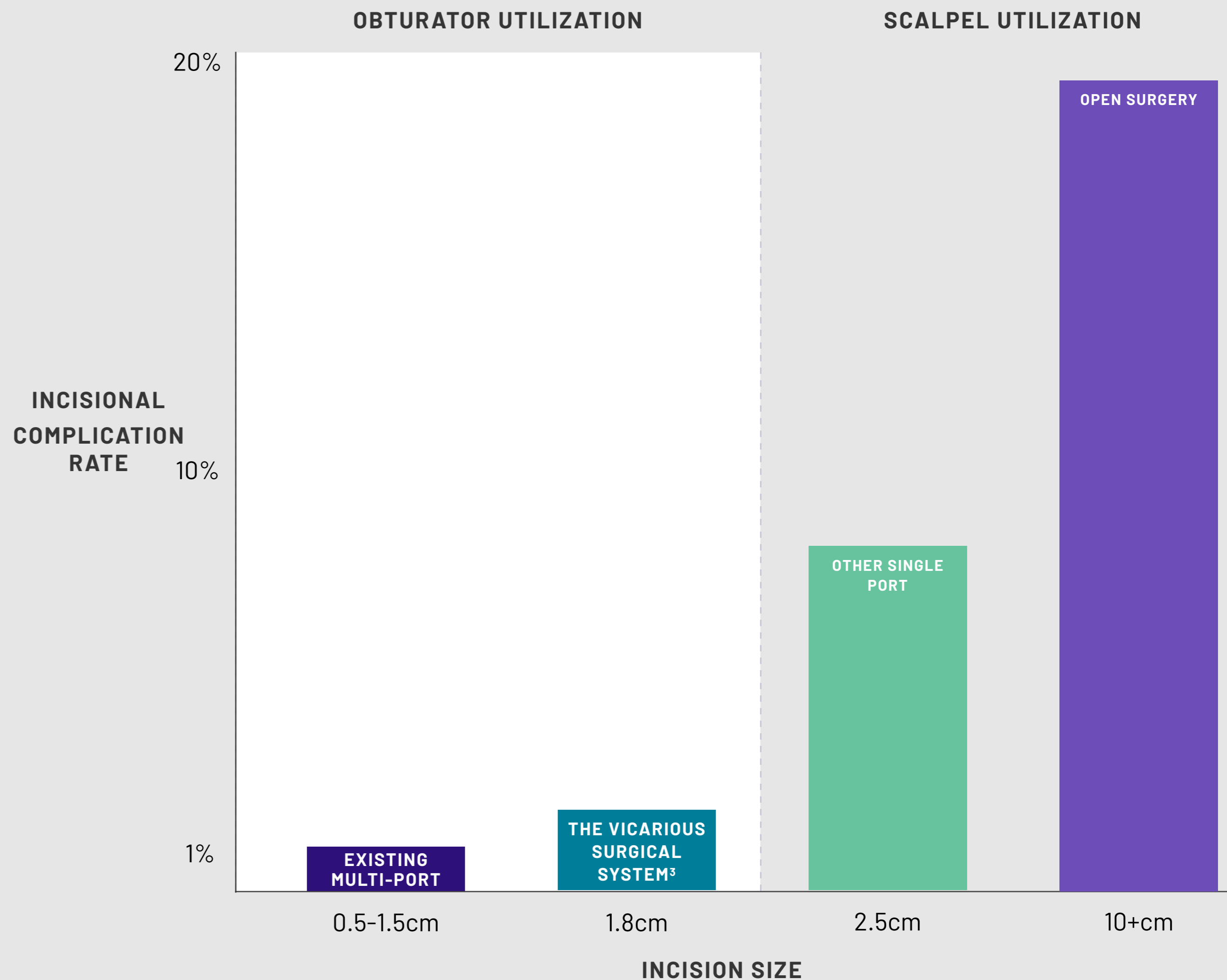
OBTURATOR

[1] VICARIOUS SURGICAL SYSTEM IS CAPABLE OF TROCAR SIZES AS LOW AS 1.2CM. CURRENT DISPOSABLES REQUIRE 1.8CM TROCAR.

[2] INCISIONAL COMPLICATION DEFINED AS OCCURRENCE OF POST-OPERATIVE HERNIA. BASED ON VICARIOUS SURGICAL'S EXTRAPOLATION OF DATA FROM VARIOUS STUDIES: (1) HERNANDEZ-GR ANADOS P ET AL, INCISIONAL HERNIA PREVENTION AND USE OF MESH, A NARRATIVE REVIEW, 2018. (2) MARKS JM ET AL, SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY IS ASSOCIATED WITH IMPROVED COSMESIS SCORING AT THE COST OF SIGNIFICANTLY HIGHER HERNIA RATES, 2013

[3] PRESENTED FOR ILLUSTRATIVE PURPOSES ONLY AND REPRESENTS ESTIMATED INCISIONAL COMPLICATION RATE BASED ON EXTRAPOLATION OF COMPLICATION RATE DATA OBSERVED IN STUDIES OF POST-OPERATIVE HERNIAS IN INCISIONS MADE USING MULTI-PORT, SINGLE-PORT AND OPEN SURGERY PROCEDURES. THIS DATA IS NOT BASED ON, AND DOES NOT REFLECT CLINICAL TRIAL OR OTHER DATA OBSERVED IN PROCEDURES USING THE VICARIOUS SURGICAL SYSTEM. ACTUAL INCISION COMPLICATION RATES AND OTHER SAFETY DATA OBSERVED IN CLINICAL TRIALS OF THE VICARIOUS SURGICAL SYSTEM MAY VARY SIGNIFICANTLY.

## COMPLICATION RATES AS A FUNCTION OF INCISION SIZE<sup>2</sup>



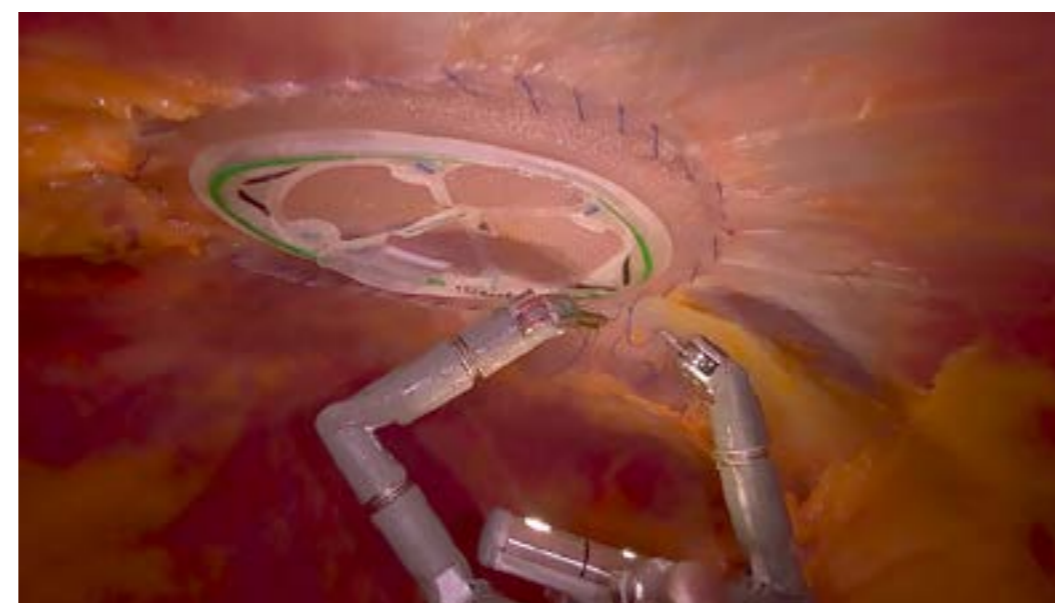
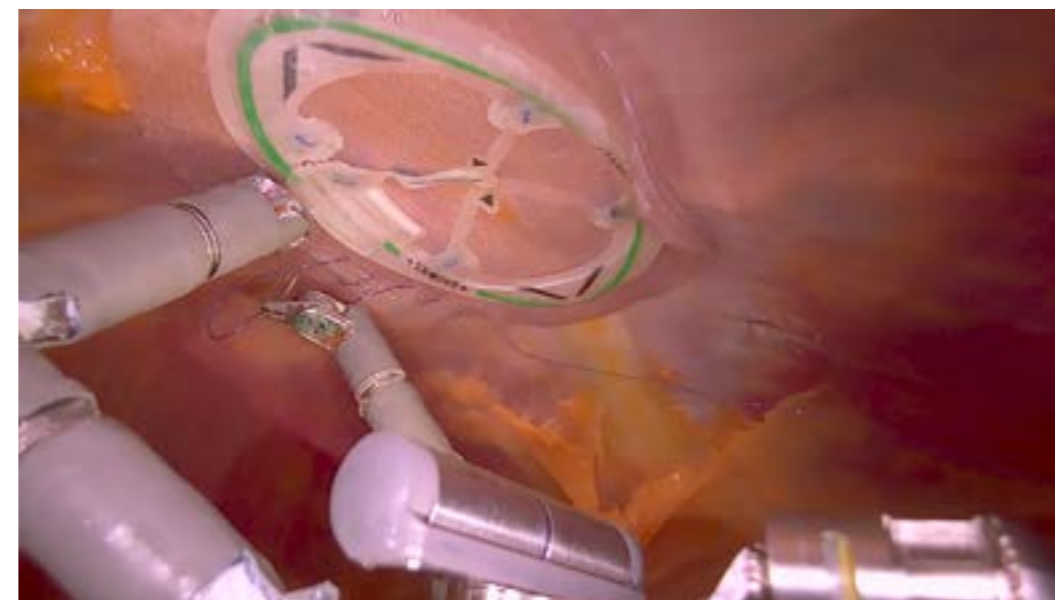
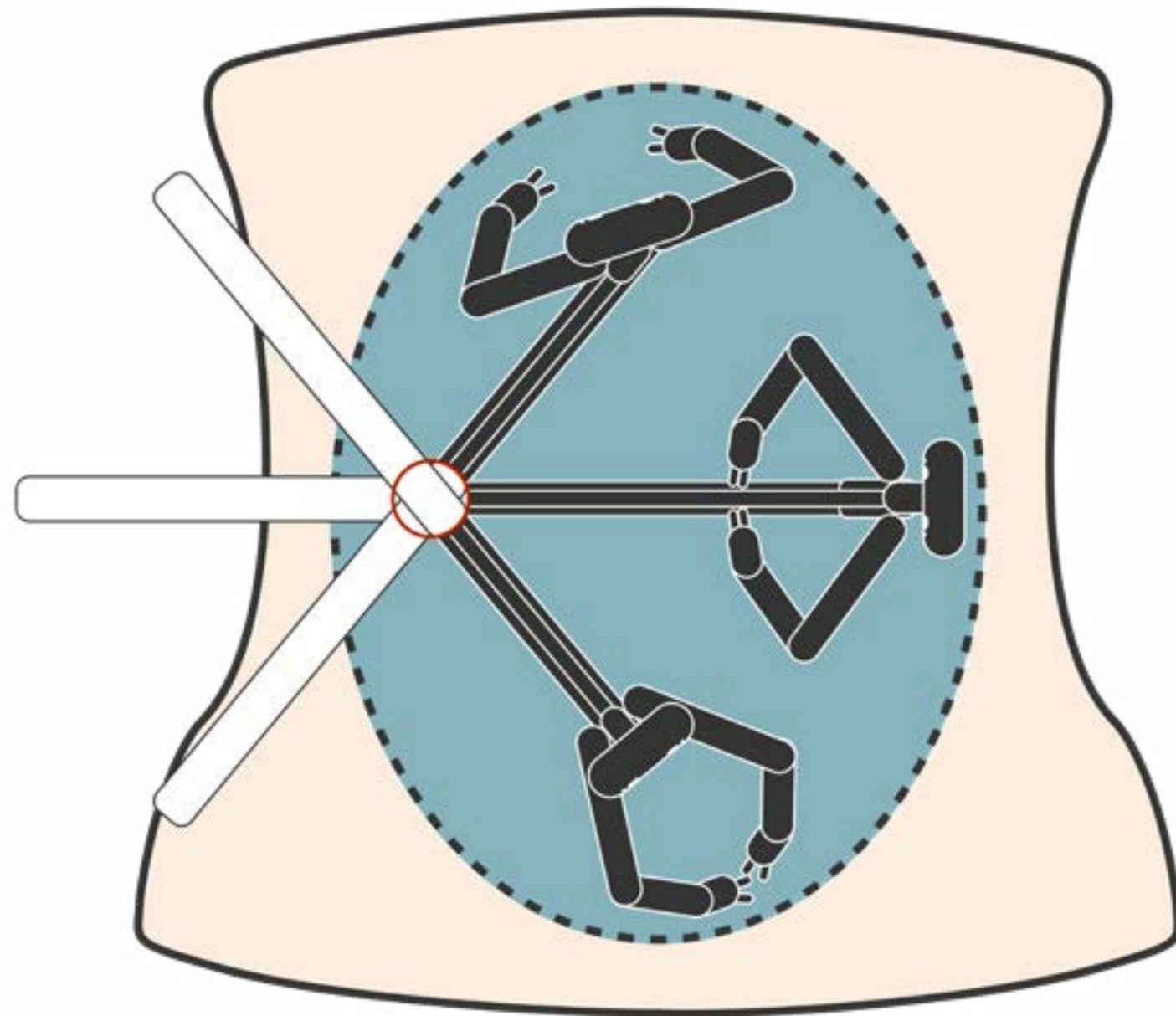




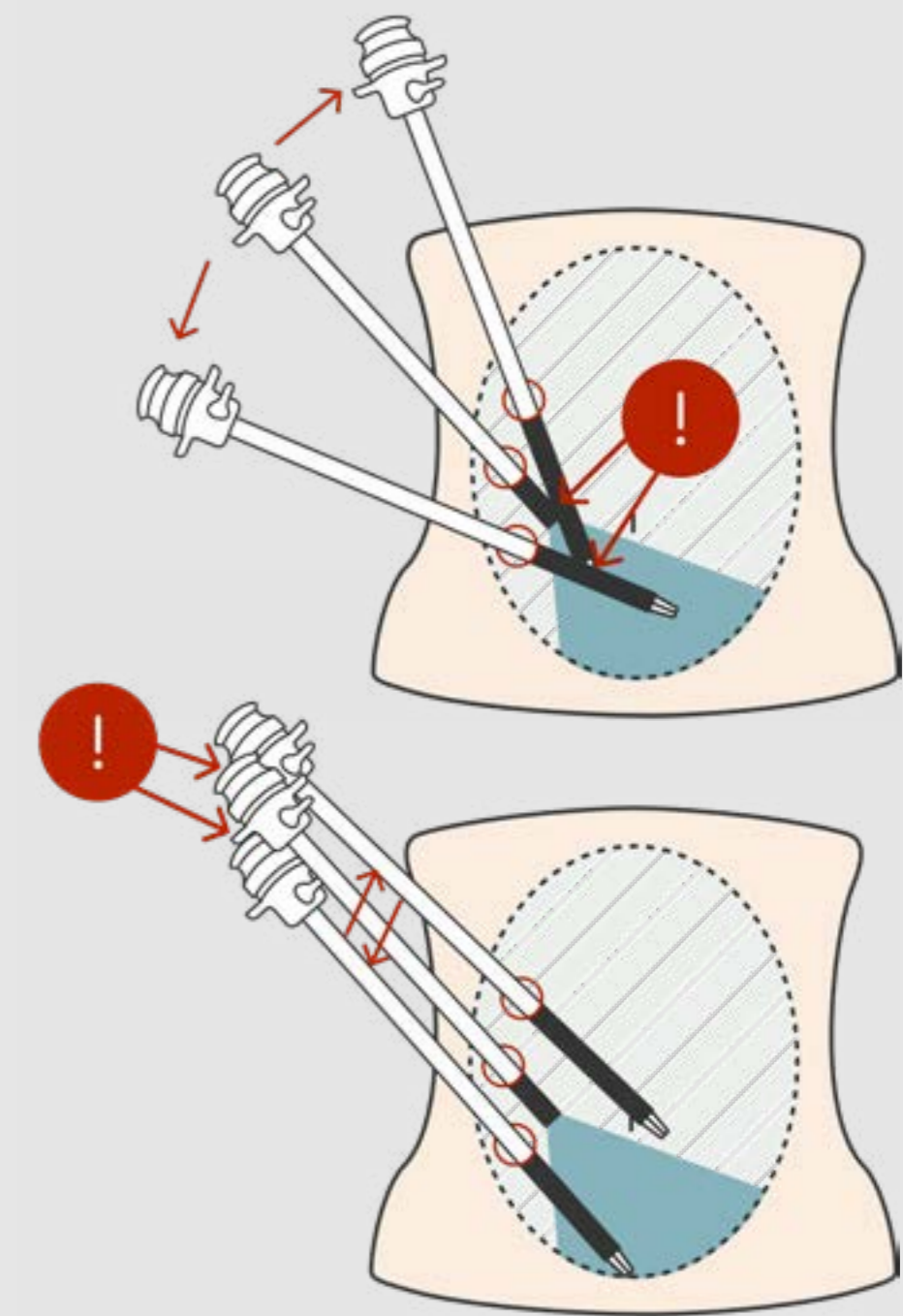
# UNRESTRICTED SURGEON WORKSPACE

**NEARLY 360° WORKSPACE IN THE ABDOMEN THROUGH ONE 1.8CM<sup>1</sup> TROCAR**

THE 13 DEGREES OF FREEDOM POWERED BY PROPRIETARY DECOUPLED MOTION PROVIDES SURGEONS UNPRECEDENTED DEXTERITY AND RANGE OF MOTION



## LEGACY SYSTEMS HAVE LIMITED WORKING AREA



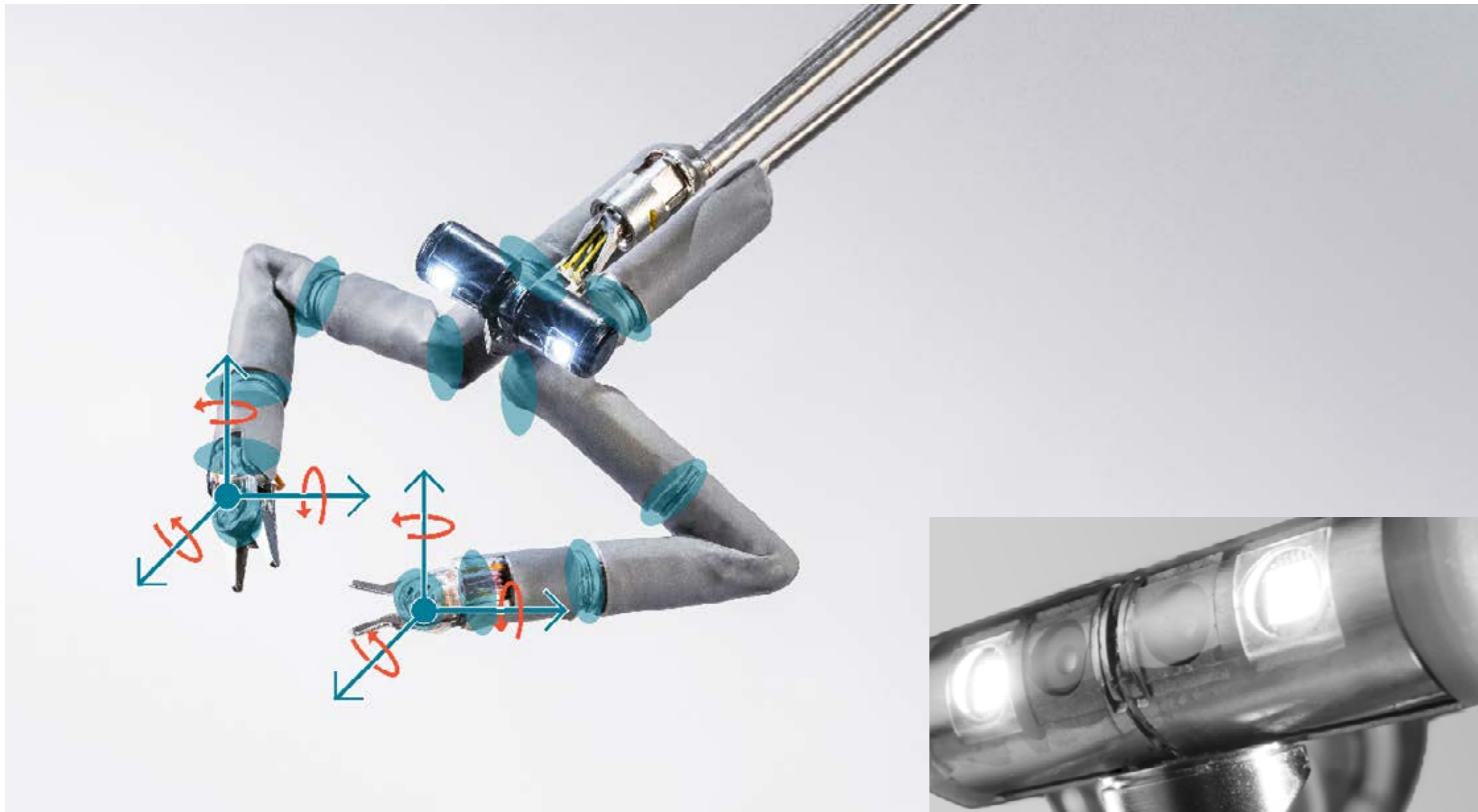
 COLLISIONS INSIDE AND OUTSIDE THE PATIENT

[1] VICARIOUS SURGICAL SYSTEM IS CAPABLE OF TROCAR SIZES AS LOW AS 1.2CM. CURRENT DISPOSABLES REQUIRE 1.8CM TROCAR.

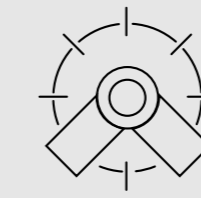


# SENSING AND VISUALIZATION

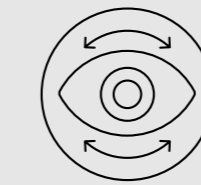
COLLECTING HIGH QUALITY DATA: THE KEY TO ENABLE SURGEON DECISION SUPPORT, MACHINE LEARNING, AND BROADER AI CAPABILITY<sup>1</sup>



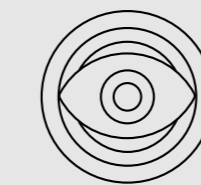
## DECOUPLED ACTUATORS ENABLE UNPRECEDENTED FUNCTIONALITY INCLUDING:



MEASUREMENT OF FORCE AND POSITION WITH SENSORS FROM WITHIN ABDOMINAL CAVITY



AUTOMATED TISSUE RECOGNITION USING UP TO 4 MODES OF FLUORESCENT IMAGING<sup>1</sup> FOR USE WITH EXISTING DYES SUCH AS THOSE TO DETECT URETERS, BLOOD VESSELS, NERVES, AND CANCER



FULL 3D ANATOMICAL DEPTH MAPPING<sup>1</sup> WITH A WIDE 120° FIELD OF VIEW



AUTOMATED CAMERA CLEANING WITHOUT EXTRACTING CAMERA

**BLINKING™**



[1] FEATURES WILL BE EXPECTED AFTER INITIAL LAUNCH AND NECESSARY REGULATORY AUTHORIZATION



# ATTRACTIVE COST MODEL

ADVANCED ENGINEERING ENABLES COMPETITIVE COST ADVANTAGE ON BOTH CAPITAL EQUIPMENT AND INSTRUMENTS

## CAPITAL EQUIPMENT

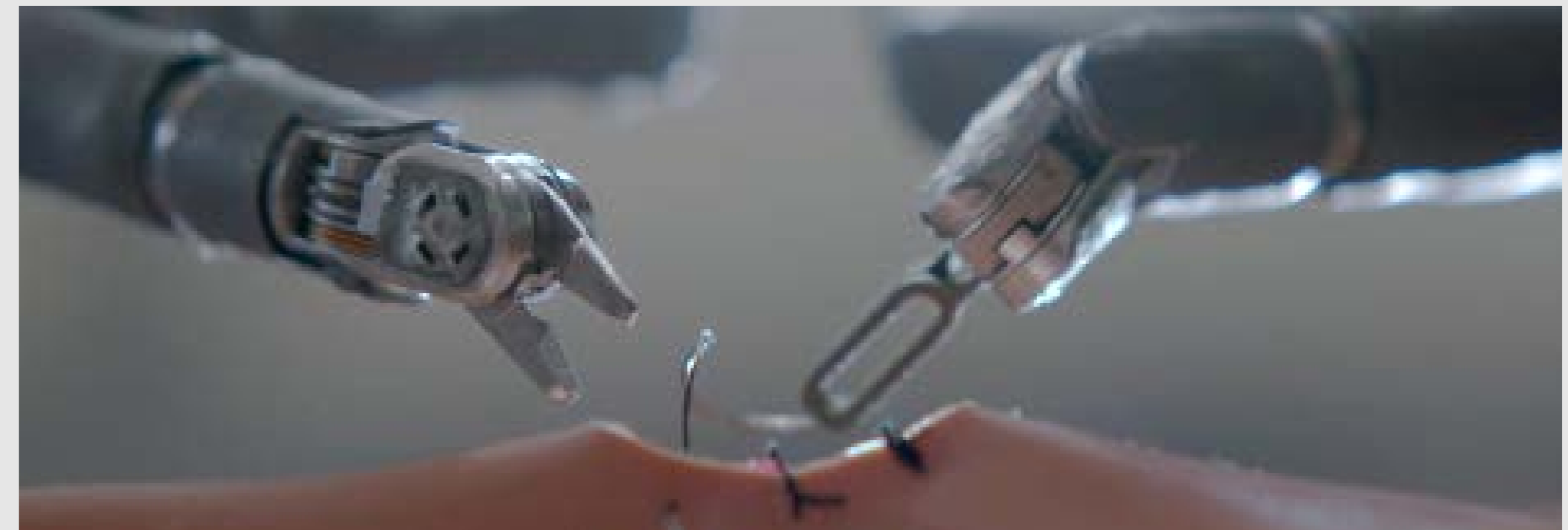


- Capital equipment is primarily non-robotic as movement is generated from within the abdomen
- Cost of goods of capital equipment is expected to be significantly lower than competing products<sup>1</sup>

[1] COMPANY ESTIMATED BASED ON QUOTED PRODUCTION PARTS FROM VICARIOUS SURGICAL SUPPLIER

[2] INCLUDES ADDITIONAL FEATURES EXPECTED AFTER INITIAL LAUNCH AND NECESSARY REGULATORY APPROVAL OF THESE FEATURES.

## INSTRUMENTS



- Decoupled actuators enable high force capability and excellent dexterity with polymer cables
- Polymer fiber cables allow for 3D printed and injection molded parts
- Enables sterile portions of system to be fully disposable or reusable
- Exchangeable tool tips enhance economies of scale<sup>2</sup>



02

# FUTURE OF SURGERY





# TRANSFORMING ROBOTICS TO BECOME THE STANDARD OF CARE

THE VICARIOUS SURGICAL PLATFORM IS DESIGNED TO REDUCE SURGICAL COMPLICATIONS, CURRENTLY 1 IN 3 TODAY<sup>1</sup>

LESS INVASIVE



UNRESTRICTED DEXTERITY AND ACCESS



ADVANCED SENSING AND VISUALIZATION



ATTRACTIVE VALUE



# AUTOMATED PATIENT PROTECTION<sup>2</sup>

THE FUTURE WE ARE BUILDING



## REDUCED ERRORS AND ACCIDENTS

By alerting the surgeon when they are deviating from the intended surgical plan or approaching critical anatomy, we can help ensure increased safety throughout the procedure



## EFFICIENT PROCEDURES

By identifying key structures, we can remove the need for detailed dissection for exposure of critical structures



## PROCEDURAL AUTOPILOT

With advanced instrumentation and anatomical identification, the platform can follow the surgeons plan, helping to reduce surgeon workload and increase surgeon confidence

[1] DHARAP SB, BARBANIYA P, NAVGALE S. INCIDENCE AND RISK FACTORS OF POSTOPERATIVE COMPLICATIONS IN GENERAL SURGERY PATIENTS. CUREUS. 2022 NOV 1;14(11):E30975. DOI: 10.7759/CUREUS.30975. PMID: 36465229; PMCID: PMC9714582.

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# BUILDING TOWARDS PROCEDURAL AUTOMATION



## UNIQUE SYSTEM ARCHITECTURE

Decoupled actuators enable **unprecedented functionality, sensing, and visualization**



## CLINICALLY RELEVANT DATA

Sensing and visualization provides specific and high-quality data



## ACTIONABLE INSIGHTS

Utilize unique and high quality procedural data to augment surgeon decision making and generate enhanced patient outcomes



## PROCEDURAL AUTOMATION

Our platform is uniquely engineered to deliver reliable, repeatable results through future “autopilot” automation

PIONEERING AUTOMATED PATIENT PROTECTION<sup>1</sup> TO GENERATE IMPROVED PATIENT OUTCOMES

[1] FEATURES EXPECTED AFTER INITIAL LAUNCH AND NECESSARY REGULATORY AUTHORIZATION. AUTOMATED PATIENT PROTECTION IS VICARIOUS SURGICAL'S TERM FOR A SET OF FUTURE FEATURES LEVERAGING THE ARCHITECTURE OF THE VICARIOUS SURGICAL PLATFORM, DESIGNED TO ENHANCE PATIENT SAFETY.



03

# PATHWAY TO COMMERCIALIZATION



# HOSPITAL SYSTEM PARTNERS

KEY PARTNERSHIPS WITH **FIVE** LEADING HEALTHCARE PROVIDERS

REPRESENTING OVER 250 HOSPITALS AND 200 SURGERY CENTERS<sup>1</sup>

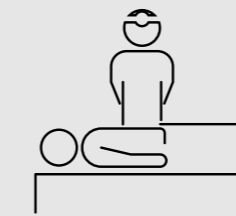


## CREATING THE FOUNDATION FOR A STRONG COMMERCIAL LAUNCH



### PRODUCT DEVELOPMENT

Leverage administrative, operational, and clinical feedback to enable design of a system that meets the needs of all stakeholders



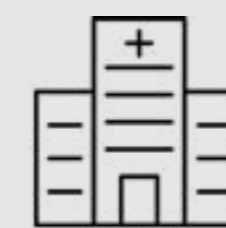
### VERIFICATION & VALIDATION

Operating room and system testing of the Vicarious Surgical platform<sup>2</sup>



### CLINICAL EXECUTION

Joint site selection and clinical trial support for FDA submission



### PLATFORM TRAINING

Peer-to-peer case observation, surgeon proctoring and learning programs

[1] NOT INCLUSIVE OF LSU HEALTH NEW ORLEANS NETWORK

[2] HOSPITAL SYSTEM PARTNERS SUPPORTING THE V&V PROCESS INCLUDING THROUGH PROVIDING SURGEONS AND OPERATING ROOM STAFF





# INDICATION PATHWAY

## 45 Million

ABDOMINAL PROCEDURES ADDRESSABLE  
BY VICARIOUS SURGICAL<sup>7</sup>

VALUE OF INITIAL MARKET

## \$150 Billion<sup>6</sup>

[1] COLORECTAL, SMALL BOWEL, BARIATRIC, ESOPHAGEAL, BARIATRIC, STOMACH (NON-ENDOSCOPIC), LSI WW 2022 DATA

[2] VICARIOUS SURGICAL ESTIMATES FROM LSI WW 2022 DATA, INCLUDES SOME PATIENTS WHO CHOSE TO NOT HAVE HERNIAS REPAIRED WITH LEGACY TECHNIQUES

[3] LSI WW 2022 DATA

[4] HYSTERECTOMY, OOPHORECTOMY, COLPOPEXY, ENDOMETRIOSIS LSI WW 2022 DATA

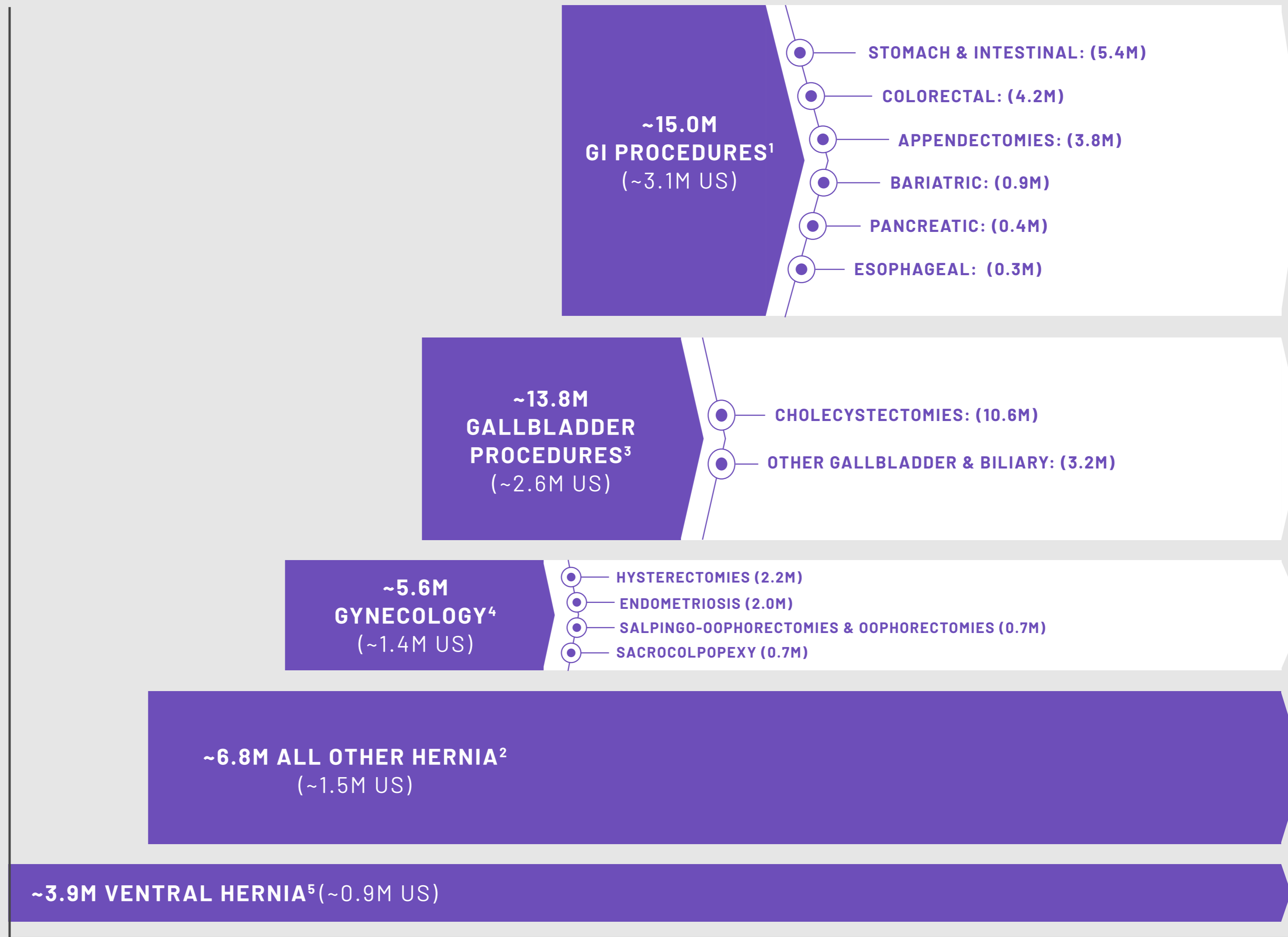
[5] INCLUDES INCISIONAL HERNIA AND UMBILICAL, VICARIOUS SURGICAL ESTIMATES FROM LSI WW 2022 DATA, INCLUDES SOME PATIENTS WHO CHOSE TO NOT HAVE HERNIAS REPAIRED WITH LEGACY TECHNIQUES

[6] VICARIOUS SURGICAL ESTIMATES FROM DATA SOURCED FROM LSI MARKET SIZE ANALYSIS 2022 DATA AND PUBLIC FILINGS. ASSUMES \$3,319 REVENUE PER PROCEDURE CURRENTLY REALIZED BY LEGACY ROBOTIC COMPANY.

[7] VICARIOUS SURGICAL ESTIMATES FROM LSI MARKET DATA. 2022 DATA

ADDRESSABLE PROCEDURES

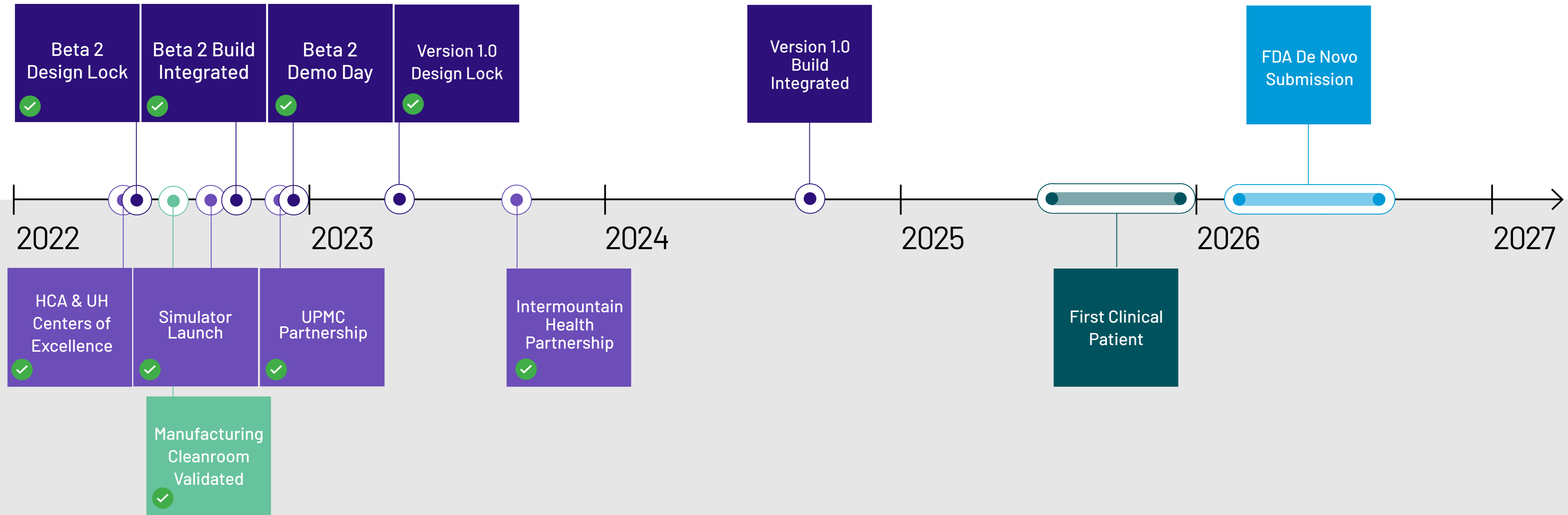
TARGET  
LAUNCH





# OUR ROADMAP

## DEVELOPMENT AND REGULATORY



## COMMERCIAL, GROWTH AND CLINICAL

NOTE: ACTUAL MILESTONES AND TIMELINE MAY VARY AS CERTAIN ACTIVITIES ARE BEYOND VICARIOUS SURGICAL'S CONTROL



04

# TEAM AND INVESTORS





# EXPERIENCED MANAGEMENT TEAM



CO-FOUNDER, CHIEF EXECUTIVE OFFICER

ADAM SACHS



PRESIDENT

RANDY CLARK



CHIEF OPERATING OFFICER

JOHN MAZZOLA



CO-FOUNDER, CHIEF MEDICAL OFFICER

BARRY GREENE



CO-FOUNDER, CHIEF TECHNOLOGY OFFICER

SAMMY KHALIFA



CHIEF FINANCIAL OFFICER

BILL KELLY



VP OF PRODUCT DESIGN AND COMMERCIALIZATION

MICHAEL PRATT





# BOARD OF DIRECTORS



BOARD DIRECTOR

DAVID HO



Noted HIV/AIDS Researcher; Time "Man of the Year" 1996



BOARD DIRECTOR

SAMMY KHALIFA



BOARD DIRECTOR

ADAM SACHS



BOARD DIRECTOR

RIC FULOP



BOARD DIRECTOR

VICTORIA  
CARR-BRENDEL



BOARD DIRECTOR

DONALD TANG



BOARD DIRECTOR

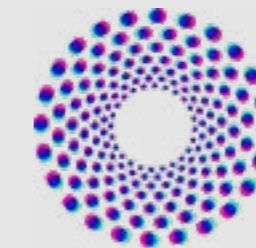
BEVERLY HUSS



# SEASONED INVESTORS<sup>1</sup>



khosla ventures



E15VC

Bill Gates

[1] PRESENTED SOLELY FOR THE PURPOSE OF ILLUSTRATING THE COMPANY'S CORPORATE HISTORY AS IT RELATES TO INVESTMENT AND THE CURRENT STOCKHOLDER BASE, AND DOES NOT IN ALL CASES REFLECT THE COMPANY'S PRINCIPAL STOCKHOLDERS. WE MAKE NO REPRESENTATION AS TO SUCH INVESTORS' CONTINUED INVESTMENT IN THE COMPANY IN THE FUTURE OR THEIR PARTICIPATION IN ANY SECURITIES OFFERING BY THE COMPANY.



# THANK YOU



**VICARIOUS SURGICAL**

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