

About Vicarious Surgical

Despite being on the market for more than two decades, legacy minimally invasive robotic surgery hasn't scaled, with penetration in only 3% of the market. Access to surgical care, meanwhile, is a looming global crisis, with a shortage of between 15,800 and 30,200 surgeons by 2034.

Vicarious Surgical, founded by engineers Adam Sachs and Sammy Khalifa while they were undergraduates at M.I.T., along with surgeon Barry Greene, MD, has a purpose of developing a surgical robot that will help make robot-assisted surgery more accessible to everyone.



Differentiating capabilities include:



AN INCISION SMALLER THAN A DIME

The Vicarious Surgical robot, with its two robotic arms and camera, can enter the abdominal cavity through one small incision just 1.5 cm in diameter. Compared to legacy minimally invasive surgery solutions, which require three to five incisions, the single-port robot being developed will hold the promise of reduced patient postoperative complications.



UNPRECEDENTED REACH & VISIBILITY

The Vicarious Surgical Robot can work anywhere in the abdomen through a small incision, facing any direction. The robotic camera can yaw, pitch and roll to give the surgeon stereoscopic imaging of the abdomen.



HUMAN-EQUIVALENT MOTION

The Vicarious Surgical Robot can fully replicate a surgeon's upper body, with its wrists, elbows and shoulders having 9° of freedom and 28 sensors per arm.



MOBILITY

The Vicarious Surgical robot can fit through a standard door, eliminating the need to dedicate an operating room for it.



VR-BASED CONTROL

A surgeon sits at a console and uses a virtual reality headset and hand controllers to see and move the robot.

THE VICARIOUS SURGICAL ROBOT
HAS THE POTENTIAL TO MAKE

surgical robotics accessible to everyone



Better patient outcomes

Smaller incisions and more dexterity and mobility are designed with the goal of more effective surgeries and reduced postoperative complications compared to traditional minimally invasive technologies.

Greater access

The robot's mobility and reduced cost of ownership make it accessible to more hospitals and surgeons, vitally important with the surgeon population aging and future projected demands for surgical procedures expected to grow exponentially.

Effective use of real-time data capture

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FOR MORE INFORMATION

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