

# Multi-sensing tool for Minimally Invasive Surgery (MIS)



Redefining the limits  
of Minimally Invasive Surgery



## Palpable

### Project Mission

PALPABLE intends to become a frontrunner in the European healthcare industry by making breakthroughs in photonic, multi-sensing systems and soft robotics devices. The project can become the perfect robotic ally for the healthcare sector by...

- offering surgeons better access to visualising tissues and identifying their properties during minimally invasive surgeries (MIS).
- ensuring a shorter and improved postoperative period for the patient.
- exploiting the manufacturing method and elements of the probe that can help the project scale up to support the growing healthcare needs in Europe.

### Project Technologies

- A thin, pneumatically actuated end-effector with proprioceptive sensing.
- A sensorised probe capable of distributed tactile sensing.
- A non-planar photonics circuit for haptic sensor array interrogation.
- A distance-sensing module.
- A stiffness profile reconstruction algorithm.

### Consortium



University  
of Essex

Queen Mary  
University of London

TECH  
HIVE  
LABS

Kendabl



Medtronic

Fraunhofer  
HHI

SOFRADIM  
PRODUCTION



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