

# Robotic Surgery Training Becomes a Reality in Scotland

## Client Case Study

### Client

A regional Centre of Excellence for burns, plastics, head & neck and upper GI services, which also provides a comprehensive range of acute & community based services and The Dundee Institute for Healthcare Simulation (DIHS) - a leading medical education centre in collaboration with Dundee University, NHS Tayside Health Board and industry partners Medtronic.

### Challenge

An English NHS Trust was in possession of a Da Vinci Si Robot which was no longer used clinically having recently been replaced by a newer unit.

The Trust needed to dispose of the old robot, which was occupying vital storage space and realise its commercial value, which was depreciating, due to the succession of the newer model.

DIHS were eager to provide robotic surgery training. Despite surgical robots being used in four health boards in Scotland, there wasn't a suitable training facility in the country. This resulted in surgeons needing to be trained in England or Overseas.

DIHS had financial constraints which prevented the purchase and maintenance of a £1.7m surgical robot.

### Approach:

Appraise various international options to understanding the market value and best commercial options for a sale of the asset.

Identify additional equipment and consumables to maximise saleability and value.

Unravel a previous sale arrangement which presented

a number of constraints and didn't guarantee certainty of sale or appropriate asset value realisation.

Communicate with various commercial partners including Medtronic to identify a wide range of potential organisations who may be interested in purchasing a used clinical robot.

Identify a buyer with altruistic motives who would promote clinical robotics and work closely with the Trust and Medical School Angela Ruskin University.

*DIHS Co-Director Dr Vanessa Kay with the newly acquired surgical robot.*



**The four thin arms are inserted into a patient through strategically placed incisions < 2 cm long. These are manipulated by surgeons using hand and foot controls enabling them to operate without the need for large incisions, facilitating greater precision and faster recuperation.**

Broker a innovative deal between two public sector organisations enabling one of them to realise the value of their asset and the other to purchase a robot to facilitate training without capital investment.

Approach a commercial partner, Intuitive Surgical to fund the deal between the two organisations and provide further support in terms of staff training,

consumable supply and maintenance provision.

## Outcome

Installation of the first clinical robot for surgical training in Scotland located at the Dundee Institute for Healthcare Simulation (DIHS) training facility in Ninewells Hospital - NHS Tayside Health Board.

The robot will be used to train surgeons and theatre staff across a wide range of specialities including: Urology, Gynaecology, ENT and General Surgery. Training will comprise basic robotic skills to advanced master classes.

Agreement of a reciprocal arrangement between Angela Ruskin University and the Trust to utilise the DIHS facility with the opportunity for the Trust's surgeons to facilitate and support robotic training.

The Trust achieved a good return on investment which was beneficial in supporting the Trust's in year financial position.

DIHS did not require capital investment as a result of commercial donation funding.

It is envisaged that the arrangement will also support the Trust's clinical workforce strategy, by building relationships with trainee surgeons through training provision and mentorship.

### Linea CEO Ian Chambers Commented:

"The requirements of the clients were complicated and both the Linea Team and I worked tirelessly to structure a mutually beneficial commercial arrangement between DIHS, the Trust and Intuitive Surgical, enabling robotic assisted surgical training to become a reality in Scotland".

"The UK is facing surgeon shortages, the provision of a world class training facility in Scotland will help in addressing these issues, whilst improving clinical outcomes in Scotland and across the UK. I am pleased that we could play an instrument part in facilitating an arrangement of this nature. I am also proud that given the altruistic nature of this

transaction Linea provided support on a free of charge basis."

### Dr Vanessa Kay Co-Director DIHS commented:

"Robotics are predicted to transform surgical processes in a similar way to keyhole surgery, pioneered in Dundee by Sir Alfred Cuschieri. No one was doing laparoscopic surgery when Sir Alfred pioneered its use and clinical implementation but now 70% of all surgery is minimally invasive".

"Soon we will start to see robotic surgery taking on more and more of the procedures currently done as a result of Sir Alfred's work. Evidence has shown that robotics can lead to better outcomes, reducing length of hospital stays, reducing amounts of blood lost during surgery and improved accuracy of technique. As such, it is vital that Scotland is at the forefront of robotics training and implementation."