



## INNOVATION AGENCY

Academic Health Science Network  
for the North West Coast

# AFFORDABLE MEDICAL SIMULATION TRAINING

### Summary

A new medical training device is being produced at a fraction of the cost of established models – leading to an increase in training opportunities and safer surgery.

A start-up business in Merseyside has won major funding to develop and market low-cost keyhole surgical simulators, based on their original model which is now used by nearly 100 hospitals in the NHS.

The provision of affordable and accessible medical simulation products creates wider opportunities for simulation-based training and learning throughout the NHS. Simulation training in the development of clinical skills allows learners to better understand clinical situations and reduces risk to patients. Learners are able to practice skills and role-play different scenarios, providing valuable preparation for real-life situations.

### The challenge

Usually, training in laparoscopic surgery is based on using high cost surgical simulation devices which are hard for medical staff to access. Existing medical simulators can typically cost up to £100,000 and are often only available to trainees through universities or hospital clinical skills labs. This represents both a significant cost to the NHS and a barrier to wider medical simulation training for learners.



### Actions taken

Inovus Medical was founded in 2012 by Dr Elliot Street and Jordan Van Flute, who built a prototype surgery simulator. In contrast to most existing solutions, their first product provided affordability, accessibility and portability.

Dr Elliot Street is an NHS Clinical Entrepreneur and was introduced by the Innovation Agency to the Small Business Research Initiative (SBRI) Healthcare, which is delivered by the AHSN Network. The company submitted a bid and secured £100,000.

In the same year, again facilitated by the Innovation Agency, Inovus Medical were successful in a bid to the European Institute for Innovation and Technology (EIT) Health, receiving 50,000 Euros. EIT supports innovative solutions to enable European citizens to live longer, healthier lives.



European Union  
European Regional  
Development Fund



## Impacts

Inovus now employs seven people, including founders Jordan Van Flute and Dr Elliot Street, and has won three awards - Insider Media Made in The North West Collaboration Award; St Helens Chamber Small Business of the Year Award; and British Chamber of Commerce Regional (North West) Small Business of the Year Award.

Inovus Medical's laparoscopic simulators are currently in use in nearly 100 NHS hospitals, potentially saving the NHS hundreds of thousands of pounds. They are located in easy to access places such as doctors' offices, wards and theatre environments. This means that trainees can access the simulators during the working day, improving their ability to carry out regular simulated training and pre-operative surgical warm ups.

## Plans for the future

In November 2018, Inovus Medical announced the successful completion of a £500,000 investment from the Northern Powerhouse Investment Fund. The funding is part of a £700,000 investment round alongside an angel investor and will help to create four new jobs, accelerating the growth of Inovus Medical's commercial operations in domestic and international markets. The company also plans to use the funding to add a suite of new 3D printing technologies to its manufacturing processes and introduce new software additions to its existing products. The company is currently marketing the Bozzini™ Hysteroscopy simulator, in the UK, Europe, North America and Asia.

## Testimonials

**Dr Elliot Street** said: "Our contact with the Innovation Agency has had a hugely positive effect on the company and has helped towards its growth over the last 18 months. The Innovation Agency has opened doors to funding, supported our funding bids and helped spread the word on the innovative work we are doing at Inovus. The support from the Innovation Agency alongside our connections with the Clinical Entrepreneur Programme and SBRI Healthcare is a prime example of the innovation ecosystem within the NHS working to maximise development and delivery of innovative technologies to improve care for our patients; it is a really exciting time to be involved in healthcare innovation and we welcome the continued support from the Innovation Agency for years to come."

NHS England's **National Clinical Director for Innovation, Professor Tony Young** said: "It is great to see the Clinical Entrepreneur programme and SBRI Healthcare initiatives coming together to support the work of one of our entrepreneurs. This is what innovation is all about, let our frontline clinical staff highlight unmet needs and then support and empower them to solve those needs."

**Mr Rory McCloy, Senior Lecturer in Surgical Education** at The University of Manchester, said: "The Inovus box simulator is particularly suited for easy storage and rapid setup. Inovus have targeted affordability and brought to the marketplace a simulator that could be purchased for personal use by trainees and surgeons as well as the unit they work in - every aspiring surgeon should have one!"

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