VEC VIRTUAL ENGINEERING CENTRE / Inovus Medical™

The Virtual Engineering Centre explores how digital tools can be utilised within healthcare teaching

BACKGROUND

Based in St Helens, Inovus Medical was set up in 2012 by two directors, Dr Elliot Street and Jordan Van Flute. This fast-paced medical hardware company create and manufacture tools designed to facilitate and improve teaching and learning within the healthcare industry.

Using industry and research based knowledge, clinician Elliot and co-founding engineer Jordan, saw a gap in the market to increase access to surgical training equipment.

They currently supply over 60% of all NHS trusts and work closely with some of the worlds leading medical device companies to develop customised training equipment.

APPROACHING LCR 4.0

LCR 4.0 Inovus' flagship product is the award-winning laparoscopic simulator which has already become well recognised within industry.

Inovus wanted to expand the functionality and features of this product to allow for a more realistic experience, adding dimensions of progress tracking and reporting to help improve clinicians' performance and align outcomes with learning pedagogy.

Inovus approached the Virtual Engineering Centre (VEC) to explore how immersive technology could be used to enhance their product and user experience.

PARTNER SUPPORT

The VEC explored the possibility of combining immersive VR and marker-based movement tracking with a low-fidelity laparoscopic box trainer.

The VEC also drew on extensive expertise in complex simulation and the integration of new technology within the healthcare industry.

RESULTS

The VEC was able to bring together Inovus' expertise and existing products together with its own experience in developing high-quality virtual test environments.

The result is a mixed reality, cyber-physical surgical training tool that allows the user to train in a VR operating theatre using a high resolution, real-time video stream and physical feedback from the Inovus laparoscopic simulator.

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This allows Inovus to explore the methodology of technology and algorithms to track the tips of surgical instruments as a means to measure the precision, speed, smoothness and consistency of practitioners performance.

This solution offers significant cost savings at the same time as improving the quality and speed of the learning experience.

WORKING TO THE FUTURE

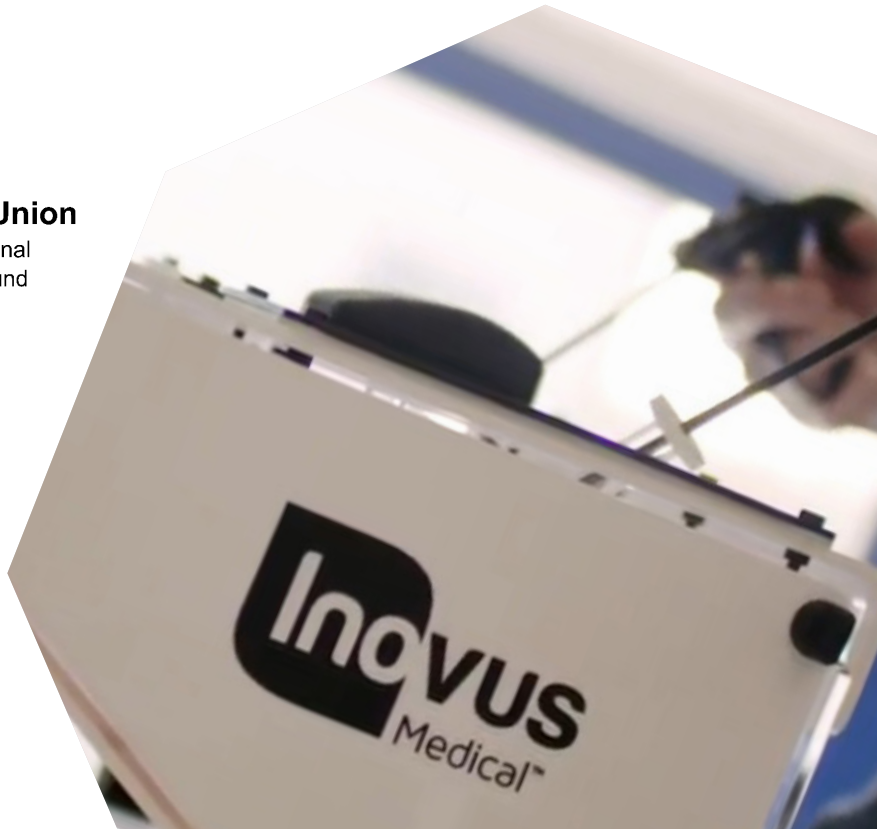
Since engaging with the LCR 4.0 project, Inovus have showcased this new technology at a local digital healthcare exhibition and are planning to release a new product which will become available for a number of users and former clinicians.

To further improve and develop their product, Inovus are looking at collaborating with a local VR company to improve the look of their Laparoscopic simulator, increasing the detail shown.

Since the completion of the project, Inovus have also increased their team by 10 new members of staff and made a £500k investment via the North West Powerhouse.

LCR4.0
Together for Manufacturing.

European Union
European Regional Development Fund



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