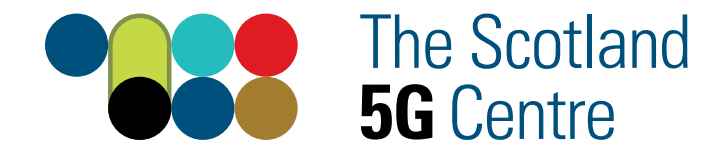


Remote 5G Training – Operation Theatre

University of Glasgow (Communication, Sensing and Imaging), EON Reality



Rural Scotland accounts for 98% of the land mass of Scotland and 17% of the population are resident there. In the Highlands of Scotland, the NHS have one district general hospital, three general hospitals and community hospitals located throughout. For example up to 15,000 patients are treated in the busy Accident and Emergency Department at the Belford Hospital every year. It is important that staff time is used wisely, particularly in rural communities where access to training can be limited due to geographic and time constraints. 5G enabled Extended Reality (XR) can provide medical staff with a real-time immersive training environment delivered by a remote trainer. Here is an example on how this emerging 5G technology from the University of Glasgow (UoG) can be applied to the healthcare sector.

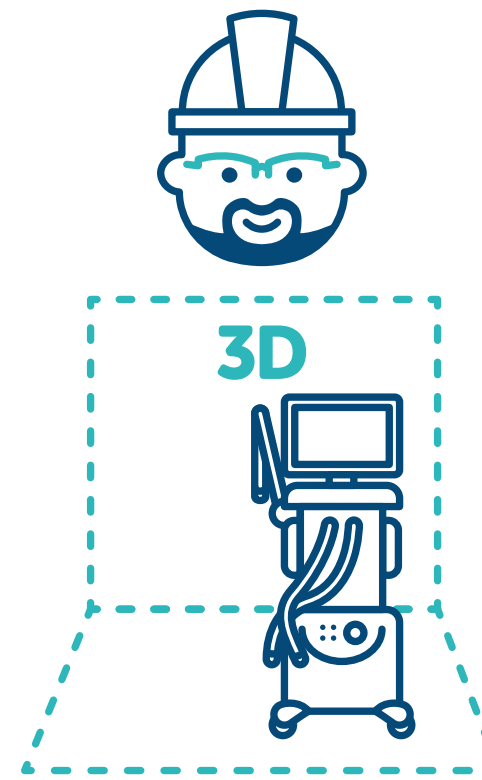
1 Situation

New Pathway Healthcare* is a small hospital located on a rural Island off the west coast of Scotland. Minor surgical procedures are conducted within the facilities and in the past year they have delivered an estimated 300 procedures. During the tourist season, there is limited staffing capacity within the hospital however each staff member is required to do mandatory training on the new machinery that is due to arrive at their facility. The 2 hour training session is being conducted in Edinburgh. To travel to Edinburgh via car it would take each staff member approximately 7.5 hours and cost up to £310.

- Rural Location**
- Limited Capacity**
- Geographic/Time Constraints**

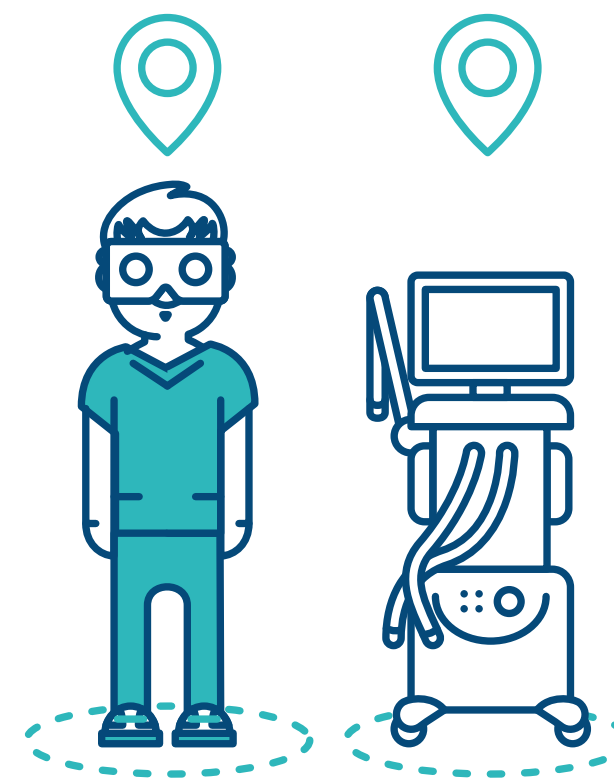
2 Task

Using XR technology, you can build a highly effective digital real-time 3D training simulation that leverages a variety of immersive learning techniques. With spatial meetings or pre-recorded training materials, one can create a variety of training solutions for different industry verticals.



3 Action

UoG has partnered with EON Reality to deploy XR tech and its adaptation at scale. UoG - EON XR Centre offers the creation and consumption of XR content for education/training purposes. The platform also supports Metaverse in the form of spatial meetings between multiple users. Building on the prior know-how of 5G and Metaverse, UoG created compelling training sessions which proved the high retention rate and creative immersivity of XR tech.



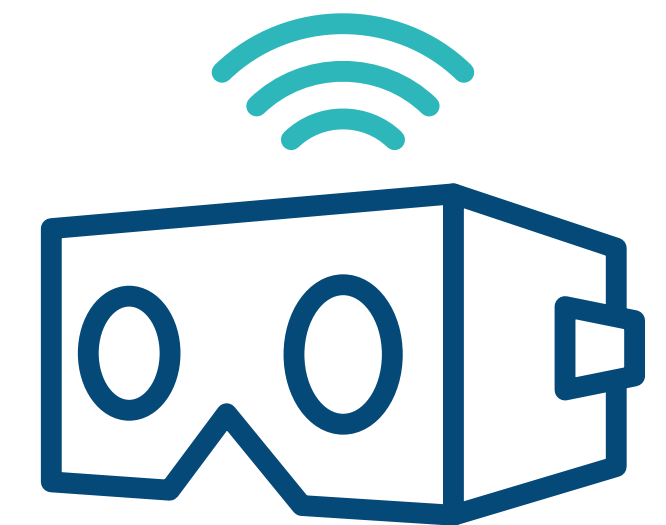
4 Results

With extended reality training, you get all the benefits of offsite training without ever leaving your workplace. Staff members are able to stand within a virtual real-time 3D operation theatre with a remote trainer. It has the capacity to increase memory recall, memory retention and higher trainee engagement. This results in increased productivity as staff members are no longer required to travel long hours and therefore this time can be spend with patients. It reduces travel costs and emissions. It also prevents high migration into busy cities like Edinburgh.

- Increase Productivity**
- Cost Saving Training**

5 Why 5G?

Futuristic XR devices need ultra-reliable low latency communication in addition to massive machine connectivity and enhanced bandwidth for seamless connectivity and enhanced user experience.



Discover your 5G potential, connect now:
www.scotland5gcentre.org

*Please note this is a concept-based example.