



FEATURE

Virtual Reality

VR is a computer-generated 3D environment in which users can move around and interact freely within the animated environment.

Augmented Reality

AR refers to digital information that is overlaid within the real world.

Mixed Reality

MR blends real and virtual objects within a synthetic world utilising chroma key technology similar to CGI rendered in real-time.

Able to practice procedures	✓	✓	✓
Full digital immersion	✓	✗	✓
Virtual objects over real-world environments	✓	✓	✓
Hand Tracking	✓	✓	✓
Able to see real hands and real objects in entirely virtual worlds	✗	✗	✓
Interaction with both real-world equipment and virtual objects in a fully immersive environment	✗	✗	✓
Practice fine motor skills	✗	✓	✓
Fast familiarisation time	✗	✗	✓

TECHNOLOGY SUMMARY

This proposal utilises Mixed Reality powered by the Varjo XR4 Focal Edition or a later model depending on the kickoff time of this project. A short breakdown of the capabilities of each of the technologies can be found above.

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Blueroom™
Innovative mixed reality simulator

WHAT IS BLUEROOM?

BlueRoom is an innovative mixed-reality simulator that integrates fine motor skill training with immersive decision-making scenarios, all set within the synthetic environments of an aircraft or austere working environment. Whether it's a military medic shifting between providing security using a firearm and applying a tourniquet on the battlefield to a doctor performing a surgical intervention during an evacuation onboard a vehicle or aircraft BlueRoom supports a wide range of applications natively. Please review the below video on Blue room



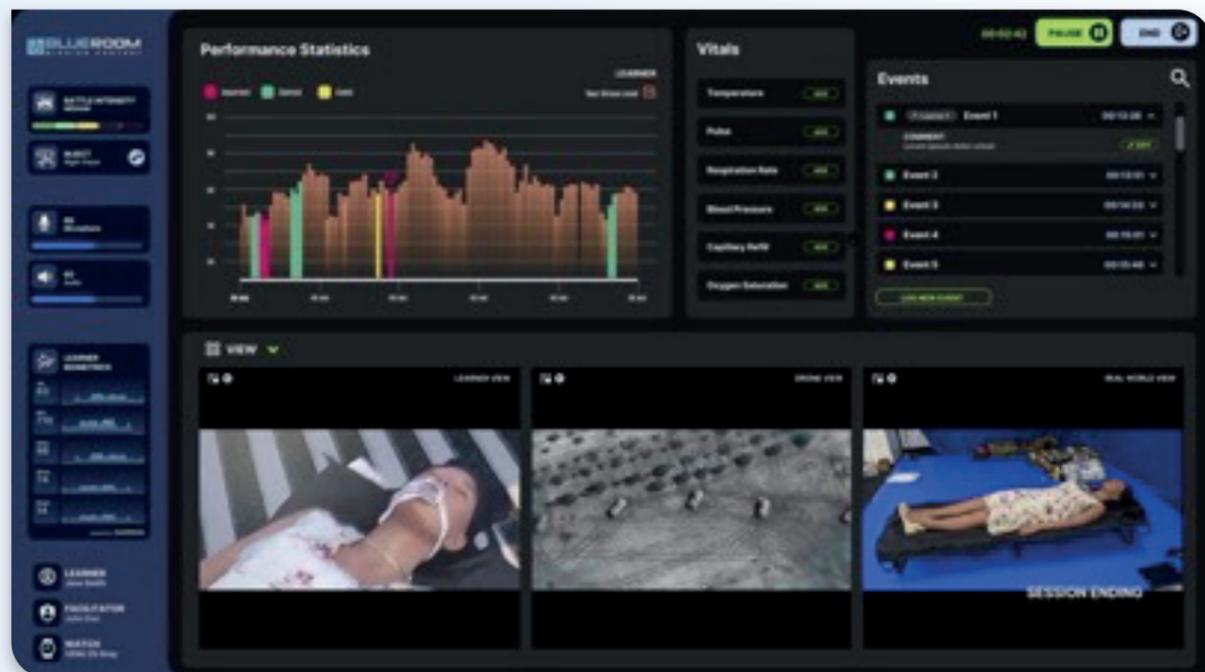
ASSESSING A PATIENT INSIDE OF BLUEROOM

MISSION CONTROL

The true magic of BlueRoom is its facilitator Mission Control. Mission Control allows a facilitator to control and monitor every aspect of the training experience, communicating with the trainee and adjusting the parameters of the experience in real time. As an example, the facilitator may adjust the offender's aggression, generate target vehicles, change a patient's condition through manipulation of a virtual patient monitor, change the virtual environment, or trigger a range of custom events to occur.

RECONFIGURABLE

The experience is completely reconfigurable allowing the environment to change from an urban to rural to highway to road vehicle and aircraft in minutes. Interoperability Leveraging MR through BlueRoom allows students to bring in any real-world equipment into the experience that can be used immediately and natively supporting advancements in equipment and true interoperability between agencies. New medical equipment can be brought into the experience and used immediately, Multiple agencies can join a training exercise and their uniforms, equipment and procedures used immediately and natively without any need for custom development by Real Response



K9 TCCC DEMONSTRATES THE INTEROPERABILITY OF THE SYSTEM

FEEDBACK AND DEBRIEFING

The facilitator may give the student feedback in real-time via a two-way radio comms system and the student is provided a detailed performance review on the conclusion of the experience to support a comprehensive debrief. During the debrief, Mission Control allows the facilitator to flick through each event during the experience (e.g. inserted IV, administered medication, activated IR etc) and view the video feed then the trainee's biometrics and stress level to support a comprehensive debrief.

This performance review may then be exported as a PDF for benchmarking or reference by the trainee or faculty. A short video on this debriefing capability can be found here - <https://youtu.be/Nlv8loXlgXs>

