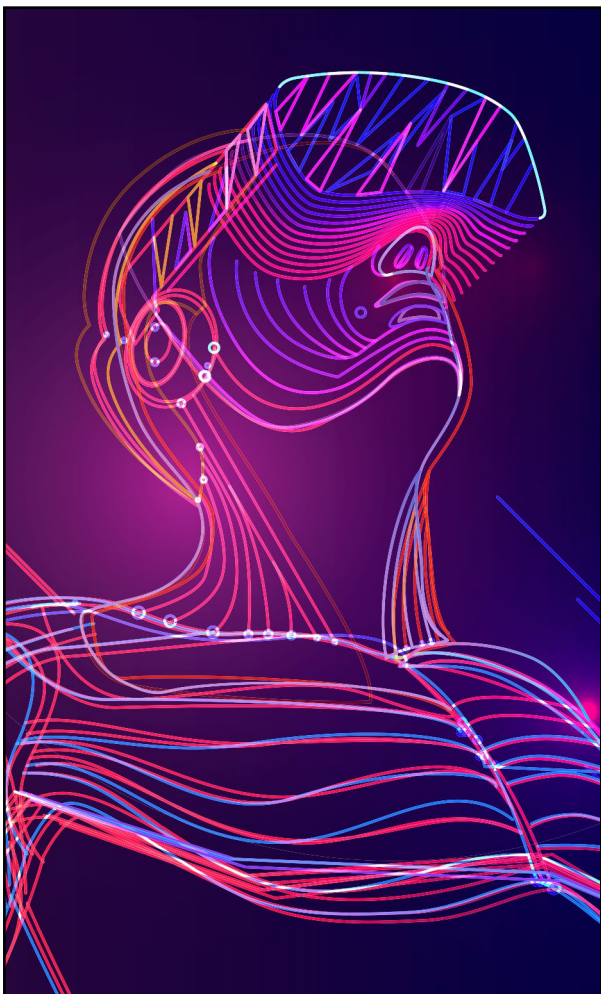
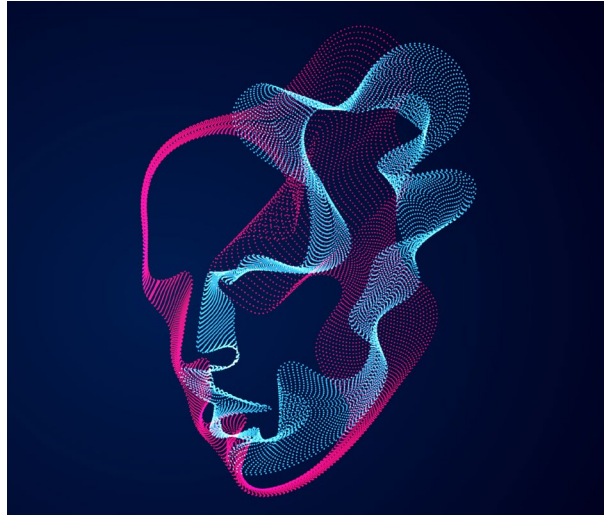


Understanding Organisational Attitudes to Immersive Experiences in Training and Professional Development

NUCCO

Facebook's 'big bet' on the metaverse announced in 2021 will perhaps be a milestone as big as Steve Job's reveal of Apple's first iPhone in 2007.

Virtual reality (VR) and augmented reality (AR) are key pillars of the immersive technologies that underpin the metaverse. Like mobile before them, they have been in the shadows, hailed as 'the next big thing' while the software and hardware has been incrementally Improved. Today VR and AR are mature, stable, low cost, and offer incredible, visceral experiences which have the ability to suspend disbelief in the user.



We are years away from them being as invisible and integrated into everyday life as mobiles, however they are playing an increasingly important role in imitating processes, systems, or scenarios, for the purpose of training, development and behaviour change for example:

- A virtual product development lab hosting live collaboration sessions with remote team members.
- An industrial training experience that re-creates high-risk work that's otherwise difficult, dangerous, or impossible to practice.
- A soft skills simulation module for bosses to practice having difficult, stressful conversations.
- A walk around the proposed interior design overhaul of a company's retail stores.

Nucco develops award-winning VR and AR experiences for many applications, so we wanted to understand how organisations felt about adopting these technologies into their training and professional development programmes.

We surveyed 250 upper level managers and C-suite execs about the extent to which they had used VR solutions, particularly with training and professional development in mind. The following pages reveal the results of that survey.

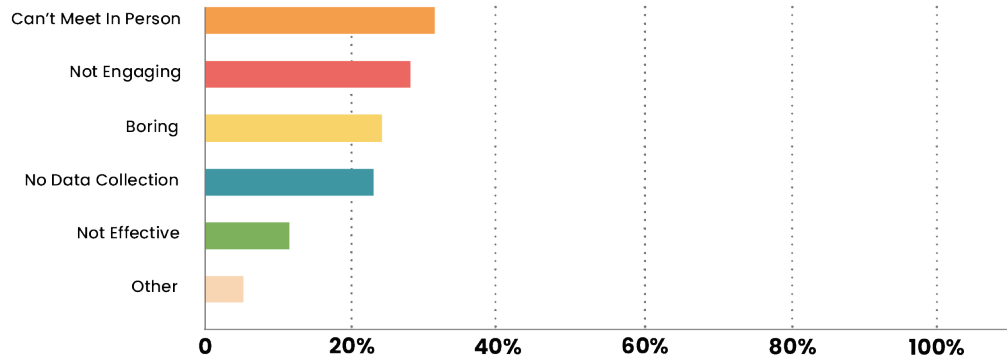
The key points are;

- **More than a third of respondents found their training and professional development initiatives boring, not engaging and dated.**
- **Less than 10% of respondents are conducting trials.**
- **Nearly half of respondents are considering a trial.**
- **Reducing cost, higher engagement and safety are the main drivers encouraging adoption.**
- **Training and development is the area seen as most relevant to immersive technology.**

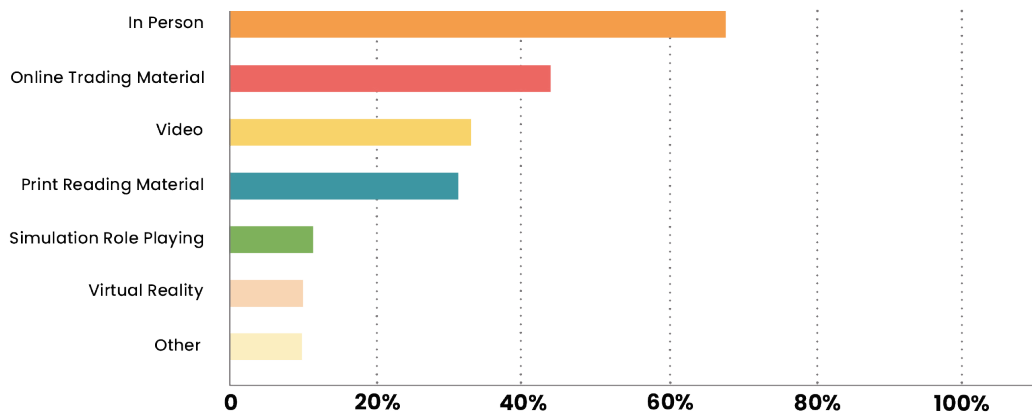
If you'd like to find out how Nucco can help you develop immersive technologies, please get in touch at contact@nuccobrain.com.



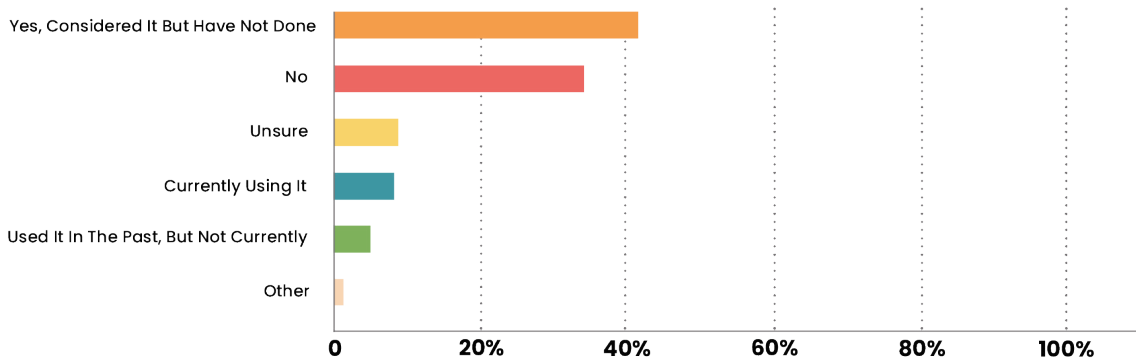
What are the shortcomings of your current training and professional development initiatives?



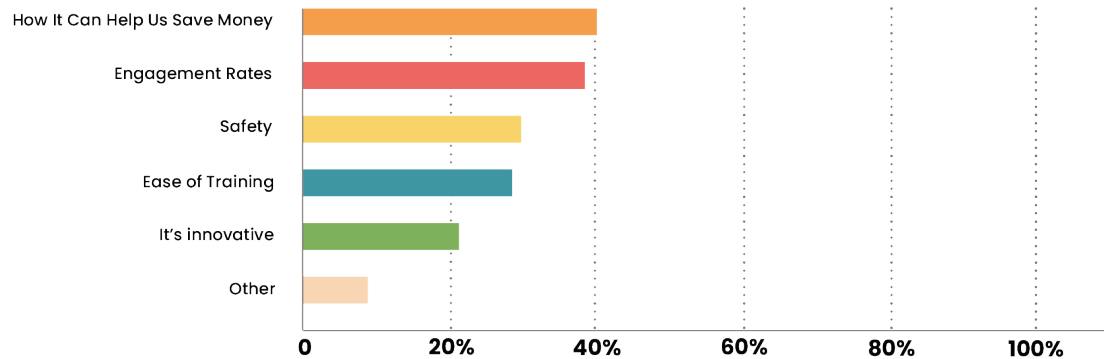
What methods of training do you currently employ within your business?



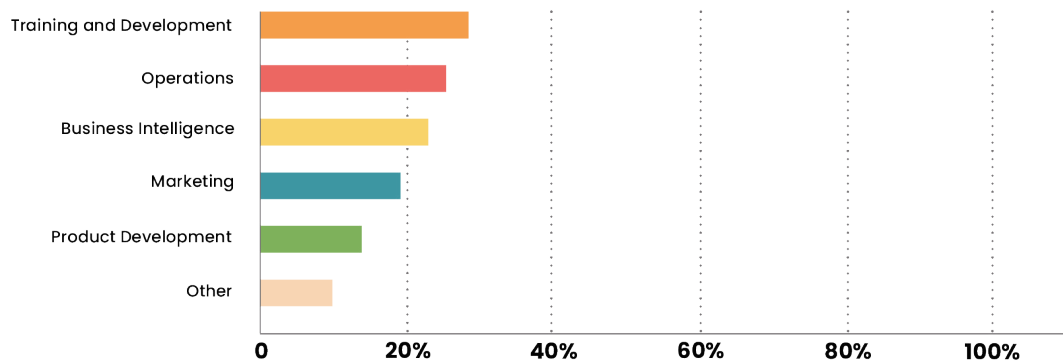
Has your organisation considered using virtual reality solutions for training and professional development?



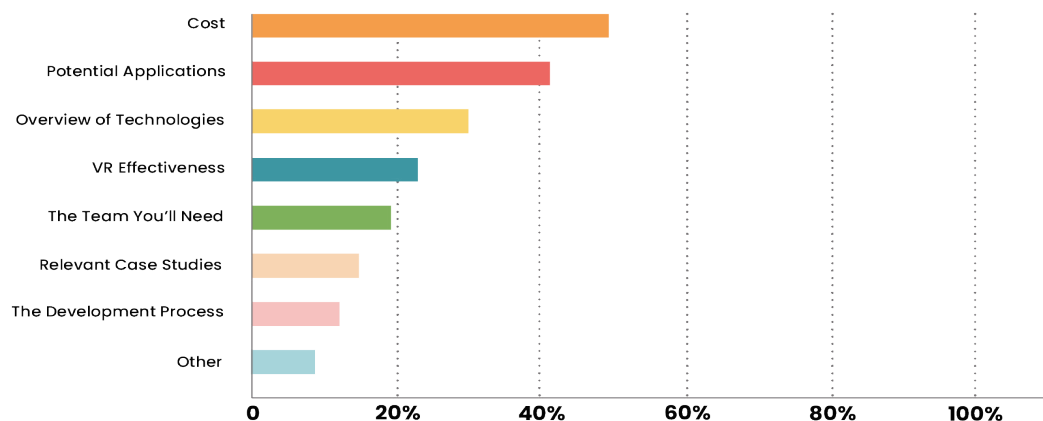
What is the most important thing to you and your organisation when investing in VR for training and development?



Has your organisation considered using virtual reality solutions for training and professional development?



What aspects of VR would you like to know more about?



Case study – How Southern New Hampshire University uses VR to improve learning and teaching outcomes in Biopsychology

NUCCO

The Challenge

Southern New Hampshire University (SNHU) is a large, innovative institution of higher education in the United States. Due to its global enrollment of more than 160,000 remote learners, the university has a keen interest in digital innovation, and established SNHU Labs Innovation Center to research and develop sophisticated new digital platforms for teaching and learning.



SNHU Labs partnered with Nucco to design and build experiential and immersive learning modules to study the effectiveness, engagement, and feasibility of VR for learning.

The Solution

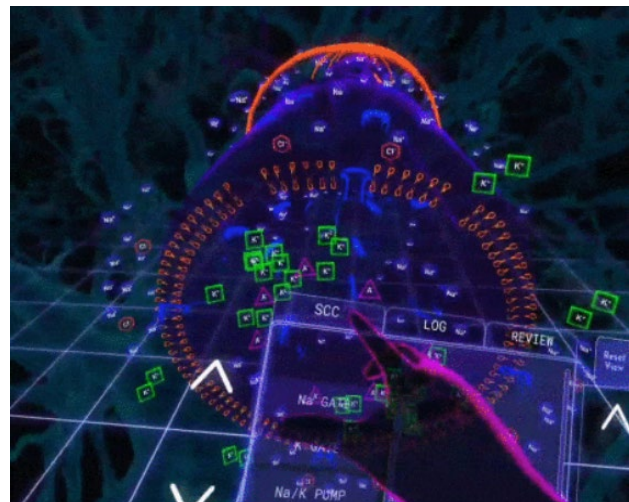
We designed and built Synapse VR, an immersive active learning experience for a course called Biopsychology, working closely with SNHU Labs' subject matter experts.

The design of the experience was informed by discussions with the professor and students to understand the topics of the course that are most challenging to learn by lectures and reading. We collaborated with SNHU Labs to see if we could enhance the learning experience, increase student motivation for the material, and experiment with a technology that is likely to offer high-quality inclusive learning experiences for students of the future.

Results

SNHU sought to understand the potential of VR to enrich the learner experience as measured by students' levels of interest, motivation, and engagement. According to Cat Flynn, Ed. M., Director of Learning Science at SNHU Labs, *"the students overwhelmingly loved the experiences with SynapseVR."*

One of the design goals with Synapse VR was to use the special features of VR to support learners to understand the unique affordances of this technology and to leverage those for the benefit of the learning experience.



Professor Peter Frost, whose students participated in the study said; *"From the outset, it was really important to us that the experience wasn't gimmicky; that it captured the nuances of the subject material in a way that both captivated and educated our students. From our perspective, Synapse VR has been a categorical success."*

[Find out more here](#)

Case Study – How Google Jigsaw used VR technology to help advance public safety



About

We're enormously proud to have worked with Google Jigsaw to design and produce groundbreaking virtual reality simulations that allow law enforcement instructors to evaluate officer performance in communication and de-escalation skills.

Recent advances in virtual reality (VR) have demonstrated the potential for technology to create scalable opportunities for law enforcement and other public safety professionals, particularly in the realm of education. In training contexts, VR can create a uniquely immersive experience, employing heightened tensions to build critical skills in an environment that mimics the same physiological responses as those generated in real-world interactions.

Through collaboration with a diverse group of civil society organisations, academics, researchers, and law enforcement in the U.S., we partnered with Google Jigsaw to research whether VR could advance de-escalation training by enhancing communication and critical thinking skills.

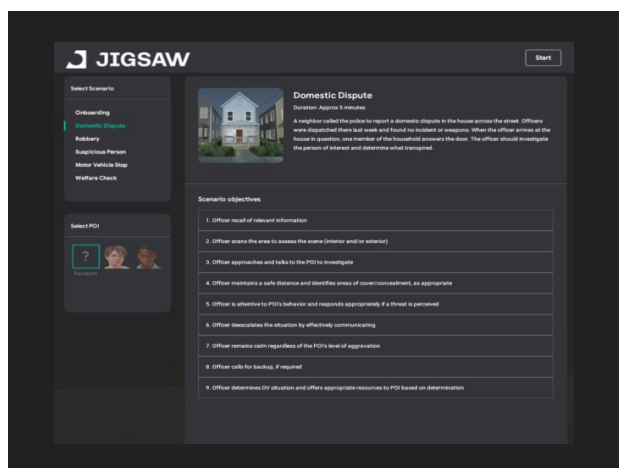
The resulting work is Trainer – a VR platform that combines recent advances in voice recognition, natural language processing, and VR to provide law enforcement instructors and criminal justice scholars, with an immersive, realistic environment to train and evaluate officer performance.

How Trainer works

Once users put on the VR headset, they're immersed in a virtual world and experience interactive scenarios with responsive virtual characters of different races, ages and genders. To hone officers' problem-solving skills, scenarios are modelled on everyday police interactions, such as domestic disputes or motor vehicle stops. The characters respond to questions and commands in real-time.

Their answers change according to the user's language and behaviour, including body positioning and interaction with objects in the virtual environment. Instructors can observe and evaluate officer performance in scenarios with different contexts and stressors.

The fluid exchanges between users and virtual characters result from integrating with Dialogflow – a natural language understanding platform that supports building speech interfaces into apps and interactive voice-response systems. Dialogflow works as a classifier to take user speech as an input and categorise it based on likely user intent. It can be expanded to accommodate new language over time, including regionalisms and novel responses, to increase the naturalness and authenticity of the interactions.





An informed approach

From the inception of this project, Trainer has relied on the research of and collaboration with a diverse group of civil society organisations, academics, researchers, civil rights activists, and law enforcement in the U.S.

Leaders within these organisations have expressed their enthusiasm for Trainer's potential and the approach to advancing VR training.

Ebonie Riley, National Action Network's Washington, DC Bureau Chief, said that she is; *"proud to have been included in a broad, diverse coalition of advocates, scholars, policy experts, and law enforcement who added input to Jigsaw's ground-breaking technologies. Jigsaw's ability to merge technological advancements, cultural dimensions and implications for civil rights and social justice in a world of growing inequality is the definition of bringing all voices to the table."*

James Shea, Jersey City's Director of Safety, said; *"The immersive training takes de-escalation tactics to a new level, providing various situations, environments, and emotions, just as our police officers experience every day in every community. Nothing studied in a textbook or shown on a screen can compare to the promise of Jigsaw's virtual reality training."*

Where we go from here

Understanding Trainer's efficacy is an important next step in the journey to leveraging it for future use as an instructional tool. Beyond training, the technology offers a controlled environment for research. The platform can provide researchers with the opportunity to study officer behaviour and explore how to reduce violence between police and communities. Trainer can be modified and expanded to support study goals by adding scenarios, changing characters' appearance or behaviour, and modifying environmental stressors to analyse a wider variety of interactions further.

Today Google Jigsaw is transferring Trainer's technology to a new consortium of academic institutions to drive research on the platform. These institutions include the University of Cincinnati, Morehouse College, University of Maryland, and Georgetown University. Each of these programs presents a unique set of research questions on the issue of equitable public safety and seeks to leverage Trainer in their ongoing research.

With the help of these partners, the hope is that Trainer will help police officers improve critical skills and better inform academics, researchers, and practitioners on successful deployment of VR training, and ultimately drive progress towards fairer policing in communities most impacted by police violence.

[Find out more here](#)

About Nucco

We are communication and experience experts that change behaviour and perspectives. We use powerful creative and emerging technologies to create projects ranging from film and animation through websites and deeply immersive VR and AR experiences.

Nucco is part of UNIT9, one of the world's leading creative, digital and content production groups.

If you'd like to find out how Nucco can help you develop immersive technologies please get in touch at contact@nuccobrain.com.

[Find out more about Nucco here](#)

Research notes

We surveyed a UK and US group of 250 upper level managers and C-suite execs about the extent to which they had used VR solutions, particularly with training and professional development in mind, during the summer of 2021.