

# VR reaches moment of truth as Apple pitches in for a slice of the action

The vision of virtual reality breaking into the mainstream is coming into focus, as Apple nudges into the picture, writes Graeme Lennox



David Whelan says Covid has been a catalyst for VR's potential

PHOTO: SHANE O'NEILL

Whether it is being used for education, video games, virtual holidays or to facilitate heart surgery, VR is rapidly becoming big business. Marketing firm Statista estimates that in three years the market for VR and augmented reality (AR) will be worth more than €60 billion globally.

Whelan, one of the leading lights of Ireland's burgeoning industry, set up Immersive VR Education with his wife Sandra in 2014.

"When the recession hit in 2008, I was earning €300 a week and looking after three kids. We were flat broke. I remember looking down the back of the sofa for €3 to buy fuel to get the kids to school."

He had been working as a web designer and construction worker. He borrowed €1,000 from his sister to buy an early VR demonstration kit and raised €36,000 on Kickstarter to make his debut app. The award-winning Apollo 11 VR educational experience, which enables users to experience the 1969 moon landing from the perspective of astronaut Neil Armstrong, has sold 350,000 copies and raised more than €2 million.

In 2017 Immersive VR Education became the first Irish technology firm listed on the Irish Stock Exchange. Following the success of Apollo 11 VR, the firm's focus has switched to its virtual reality education platform, Engage. Whelan says the market is ripe for Apple and other tech companies.

"VR was never going to be a commercial success when you had to attach it to a high-end PC costing €3,000," he says.

"In the past 12 months we've had the arrival of affordable headsets that are easy to use out of the box. Everything is in place for Apple to come in, make it look cool, put an Apple sticker on it and sell it for three times as much as anybody else."

Apple's hardware, which is thought to feature two 8K displays, a dozen tracking cameras and a Lidar system that enables both VR and AR, isn't due until next year. Sony's PSVR headset, which launched in October 2016, sold more than 5 million units but required two cables to be tethered to the headset. Last month Sony announced it was working on a second-generation model with just one cable. In the meantime, Facebook-owned

Oculus launched Quest 2 last October. The €349 VR headset enables users to play high-end PC games wirelessly.

As technology improves so too does the quality of the VR experience. Valve's Half-Life: Alyx won numerous game of the year awards; director Rose Troche's hard-hitting account of homelessness in modern America, We Live Here, shows that VR experiences can be profoundly moving as well as immersive. Nevertheless, VR faces several hurdles before it can be considered truly mainstream. Right now headsets tend to be large, shutting off the outside world. The holy grail of VR is a set of glasses that immerses users in powerful high-definition worlds but which are no more obtrusive than a pair of sunglasses. Achieving that requires a technological leap, but telecoms firms are hoping expected to introduce low-cost AR glasses within three.

While Apple's knack for rebranding existing tech and making it a commercial success would be a welcome shot in the arm for the industry, Ireland's VR sector already punches well above its weight.



Terry Madigan from Virtual Reality Ireland is working with Irish National Opera to create an immersive opera experience

Dublin-based Virtual Reality Ireland is working with Irish National Opera to create an immersive VR opera experience in 2022 as part of a Europe-wide Horizon 2020 project. Terry Madigan, chief executive of Virtual Reality Ireland, says the industry is at a tipping point. "Until now we have been in a chicken-and-egg scenario, chasing 4K resolutions and improved processing power, but the fidelity is there now and it's a highly realistic experience," he says "We're seeing more competition, with the big tech companies making announcements and getting supply chains moving, and it's a great time to begin a journey in VR because there is so much great content. Not everybody needs one of these devices, but we said that about mobile phones and smartphones."

The impact of Covid-19 has allowed VR to shake off its gimmicky image. According to analytics firm GlobalData, the number of tech firms name-dropping AR and VR has doubled in the past year. Virtual tourism is a

growth area with apps such as National Geographic VR and Wander taking users to far-flung destinations in the safety of their homes.

Consultancy firm Accenture has introduced VR exercises to assess graduates applying for technology roles. Meanwhile, Adopt South, an agency based in the south of England, uses VR to let prospective adopters experience traumatic scenarios suffered by children in their care.

In future, job interviews could be done by strapping on a headset and wowing employers in virtual boardrooms. As lockdown leaves office spaces deserted, companies are setting up virtual spaces where employees can meet and exchange ideas. File transfer service WeTransfer launched a 3D virtual office modelled on its Amsterdam headquarters where employees' avatars can have virtual coffee meetings and happy hours. The environmental benefits are huge. Bosses at Irish tech firm VRAI reckon VR could reduce global flight numbers for work training by 25 million a year.

Trinity College spinout Volograms makes 3D virtual holograms that enable interaction in virtual spaces. Chief executive and co-founder Rafael Pagés reckons VR uptake will accelerate as technology improves.

"We're not going to wake up one day and suddenly spend our lives in VR like in the film Ready Player One," he says. "At some point we will be wearing VR or AR sunglasses that replace computer screens or the phones in our pockets. Our clients are more interested in telling stories than games. They want realistic avatars rather than something cartoonish. Our vision is to simplify the tech to the point we are able to do that on a single phone.

"When we started out, there were three firms in the world doing this. Now there are 20. It's still niche but it is growing all the time."