

The Digital Catapult's Augmentor programme comprises of a 12 week accelerator programme and concludes with a presentation to investors and industry experts.

At the end of January a showcase was held at the Catapult's central London offices. Comprising of 10 start-ups, who have been using virtual or augmented reality to develop commercially viable products or solutions, they presented their ideas to the investment community.

"The programme supports early stage businesses that are developing innovative and commercially-focused applications of augmented and virtual reality," explained Jeremy Silver, CEO, Digital Catapult. "By partnering with leading investment funds, it gives investors a much greater understanding of advanced augmented



Creating an immersive ecosystem

The Digital Catapult's Augmentor programme plays a critical part in developing a connected ecosystem for immersive technologies. By **Neil Tyler**

and virtual reality technology,"

The Catapult also connects established companies with start-ups and researchers and provides physical and digital facilities for experimentation and testing, but crucially it works to help de-risk innovation and promote new commercial applications of digital technology.

"The Catapult looks to discover businesses with the most commercially viable solutions and then gives them the skills to approach investors," explained Silver. "Our work is all about bringing together the entrepreneurship of start-up businesses, with large corporations and academic research."

According to Silver it's also about stimulating the right market conditions so that the best companies are able to get to market faster and, in the process, help the wider UK economy.

For companies and investors active in the immersive space it has been described as a 'rollercoaster experience', but as we head into 2020 that could be about to change.

At the end of 2019 the sector started to see more use cases appearing and, critically, more tangible evidence of the benefits of using VR and AR. For many investors, these innovative technologies have lacked the necessary data to underpin specific use cases. Today, however, the conversation is much more ROI focused and less anecdotal.

Another key influencer is the growth of a more extensive ecosystem and the scaling up of capabilities making it easier to get the technology onto different platforms.

The ecosystem is developing rapidly and many of the key constituent parts are now ready, whether that's the roll-out of 5G or the development of new

hardware. Larger corporates are also now investing in AR which for many has become an R&D priority.

Another area that is supporting the ecosystem is the development of tools – Unity, for example, has developed the Mixed and Augmented Reality Studio (MARS) which has been specifically designed to help the company's creators make better spatial experiences and games that can run anywhere.

The immersive community

Among the cohort of Augmentor teams presenting were Agile Datum, a data science company focused on improving the planning and house building market; Artificial Artists, a team of interactive and VFX specialists that has developed a 3D animation platform that empowers artists to create quality 3D content for digital and immersive media; Extend Robotics

which is developing a drone flying platform with two robotic arms, which is guided by virtual reality technology over 5G to perform manipulation tasks remotely; Imaged Reality, a VR and AR start-up which believes immersive technologies will be able to transform training, knowledge and skill development across the Oil & Gas, mining, construction, engineering industries and universities and Resus VR, a medical training start-up looking to improve the decision making of healthcare professionals through exposure to VR simulations.

“Extended Robotics looks to provide a modular robotic system that can be installed on drones, rovers and climbing robots, for example,” explained the company’s founder and CEO Chang Lui.

“When it comes to today’s robots they tend to be handcrafted and fine-tuned for a specific task, and it’s hard to deploy robots in complex real-world situations. What we are developing is a physical avatar of a user so that they can perform manipulation tasks remotely using VR over a 5G connection - an avatar twin.”

According to Lui, it will provide a safer and more comfortable work environment for the user, and will lead to significant cost savings – pointing to the costs incurred in terms of the installation and maintenance of telecom infrastructures.

Another start-up present was Imaged Reality, that’s been set up to focus on the oil and gas sector.

CEO and founder, Claudia Ruiz-Graham, explained that its VR enterprise platform, 3DGAIA, is intended to reduce the risk and uncertainty that’s associated in finding oil and gas in difficult geologies that have to be investigated.

“3DGAIA helps the geologist by bringing the field to the office,” she explained. “We enable immersive learning and remote collaboration, which means it’s possible to connect expertise from around the world.

“We use high resolution field

outcrop models, derived from data collected by drones, to create collaborative sessions or training courses.”

Two major oil companies have already licensed the company’s software and it has delivered its first geological field trip to Shell.

There has been a lot of hype around VR and, to a lesser extent, AR but according to Silver, “2020 is certainly looking more promising. The creative and commercial opportunities offered by immersive technologies like VR and AR are exciting and certainly diverse, but there are still challenges when it comes to raising investment and creating sustainable businesses.”

The Augmentor programme, started three years ago, has had a number of successes to date, such as Gravity Sketch, HoloMe and Reality Zero - companies that have gone on to raise investment and achieve commercial traction.

But while the programme is all about taking these ideas and experimenting with them, the aim has to be about turning them into strong commercial propositions.

According to Iulia Tudor, Investor Engagement Manager, Digital Catapult, “Investor appetite for immersive technologies is on a high this year, but according to our own research access to finance remains a significant challenge for start-ups operating in this space.”

“Immersive technologies offer great opportunities for investors,” according to Dave Haynes, Director Vive X, HTC EMEA. “But one of the biggest challenges for investors is actually timing. Being too early to the market can be as big a problem as picking the wrong technology. We are dealing with a niche market and investing other people’s money, but we are seeing huge growth potential in this space.

“It’s essential that we look to support start-ups that are building the products, platforms and enterprise solutions of the future. Our aim at Vive X is to help cultivate, foster

and grow the global VR ecosystem and to do that by supporting start-ups with education, investment and mentorship.”

According to Tudor this year’s Augmentor programme attracted double the number of investor partners, which in itself suggests that there is real investor appetite in terms of what the sector can offer and the scalability of the technologies being developed. There do remain concerns that when it comes to immersive technology investors are more averse to investing than they would be with other technology.

“Investors are looking for traction in the market, and it’s not there yet,” admitted Haynes.

He made the point that for investors, “Business models need to be understood and proper sequencing is critical, both of which require dialogue between the investor and the company.”

According to Haynes investment in consumer oriented immersive technology is challenging.

“That’s especially true when you compare it to the enterprise space where it’s possible to have a much clearer and more coherent business case for the technology. Investors will also be looking for meaningful revenues and a solid client base.”

Despite the obvious risks associated with any type of investment the future of the immersive ecosystem is seen as a bright one, especially here in the UK.

“The UK has an excellent foundation in manufacturing and the creative industries with expertise in all aspects of production and the ability to find and develop impactful use cases,” suggested Jessica Driscoll, Head of Technology – Immersive, at the Digital Catapult.

“With hardware becoming more mobile and affordable, cross technology opportunities with both 5G and AI, will help AR and VR demonstrate the power and value of immersive technologies.”

“2020 is certainly looking more promising. The creative and commercial opportunities offered by immersive technologies are exciting and diverse.”

Jeremy Silver