

Wednesday, 29 March 2023

INVESTING IN VIRTUAL REALITY TECHNOLOGY TO MAKE FIREFIGHTING SAFER

Breakthrough Victoria is helping to make training safer for firefighters and the environment with its investment in a Victorian company behind the world's first fully immersive virtual firefighting training system.

Breakthrough Victoria, an investment company established by the Victorian Government to drive innovation in Victoria, today announced it will invest \$5 million in FLAIM Systems.

The company has developed an immersive virtual training system that replicates the stress and uncertainty of real-world firefighting situations. From bushfires in remote locations to fires on aircraft, industrial sites and residential properties, FLAIM Systems has created 80 different virtual reality (VR) training scenarios that allow firefighters to train across different situations with no risk to their health or the environment.

VR training reduces firefighters' exposure to potentially carcinogenic substances in training, like PFAS foam. It also benefits the environment by reducing water consumption, carbon emissions and PFAS foam usage.

The FLAIM Trainer combines a VR headset with haptic technology, creating a kinaesthetic 'feels-real' experience by applying force feedback to the user. This includes simulating an operational fire hose and a thermal vest that reproduces the heat firefighters would experience from the direction of the fire.

It also uses innovative real-time data to track performance against training outcomes. This includes task completion time, stress levels and air and water usage. It can also sense where the trainee is moving and looking within the scenario, as well as how they position themselves and interact with virtual objects such as gas meters, electrical boxes, or the fire itself.

With more than 10 million professional and volunteer firefighters globally, this technology has the potential to make training safer for firefighters and the environment around the world.

FLAIM Systems is already working with emergency services agencies, defence and private enterprise in Australia, the USA and UK. Breakthrough Victoria's investment will support the company to expand its operations internationally and further develop its technology, creating 25 new jobs by 2026.

FLAIM Systems was born out of Deakin University in 2019. Chief Technical Officer and Founding Researcher, Dr James Mullins, was able to apply his knowledge as a third-generation rural Victorian firefighter to his research into robotics engineering and virtual training capabilities.

Quotes attributable to Breakthrough Victoria Chair, the Hon. John Brumby AO

"Firefighters put their lives on the line to keep our community safe. This innovation in virtual reality training will help keep them safe during training and provide the experience they need on the frontline."

"We see a real potential for this world-first Victorian technology to be adopted by emergency services agencies around the world, which is exactly what we look for in our investments – innovation that can be commercialised to deliver sustainable returns and make a difference in people's lives."

About Breakthrough Victoria

Breakthrough Victoria is an investment company established in 2021 to manage the Victorian Government's \$2 billion Breakthrough Victoria Fund. We invest in innovation for impact – supporting companies to commercialise new technologies that will create jobs and investment in Victoria and have a positive impact on people's lives.

Quotes attributable to FLAIM Systems Chief Executive Officer, Simon Miller

"This investment by Breakthrough Victoria will support FLAIM to build the foundations for global expansion as we enhance our technology stack, strengthen and scale-up our team and accelerate our go-to market strategy."

"With the annual cost of firefighter injuries estimated by the US Fire Administration at between US\$1.6 billion and US\$5.9 billion in the US alone, and 14 per cent of all injuries incurred during training, we see significant scope to commercialise FLAIM's innovative Australian technology as we seek to protect the lives of those who respond to hazardous fire, safety, rescue and emergency situations."

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