



# INNOVATORS

## BREAKING BARRIERS

THE FUTURE OF SIGN LANGUAGE INTERPRETATION LOOKS BRIGHT,  
THANKS TO SURREY RESEARCH PARK-BASED STARTUP SIGNAPSE

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**Did you know that there are approximately 87,000 people who use British Sign Language (BSL) daily in the UK? However, up until now, due to a limited number of human signers and a lack of suitable alternatives, the Deaf community has faced major barriers in communication and messaging. Research has shown that Deaf people can experience worse quality of life, compared to hearing people, across a range of measures, including their health, employment opportunities and educational attainment.**

Born during lockdown and launched in spring 2022 Signapse is revolutionising BSL interpretation to enhance the lives of Deaf people in the UK and around the world. The startup, based at Surrey Research Park in Guildford, has set out to create a lower-cost, accessible solution

to ensure those who use sign language can access services in their native language.

Signapse CEO Sally Chalk, who is also the founder of Clarion Interpreting Limited, the UK's largest BSL interpreting business, explains that the technology has two important aspects to it. "First, we built a photo-realistic digital signer that is indistinguishable from a human signer, using AI video generation techniques. We are strong believers in photo-realism over the use of graphical avatars, which have been routinely rejected by the Deaf community. Next, we animate this digital signer using portions of human recorded signing that can be blended to generate novel utterances."

The goal is not to replace human signers, but to dramatically increase the quantity of signed content that can be made available where



> Co-founders Sally Chalk and Ben Saunders



human interpretation is difficult. This will enable interpreters to focus on in-person interpretation and emergency situations which require a face-to-face human signer.

The development process of Signapse was predominantly funded through external



> The Signapse team

## Signapse

investment with a pre-seed funding round, with a part match funding by the University of Surrey. As well as enabling the team to build their first product, a synthetic signer tool that can anonymise sign language videos whilst retaining the original sign language content, it provided valuable insights into where Signapse's technology is needed the most.

The business identified transport and broadcast media as its top two markets. Since launching, its AI technology has been deployed to produce automatic train announcements in sign language – this is scalable across 2,500 stations in the UK, as well as across the globe.

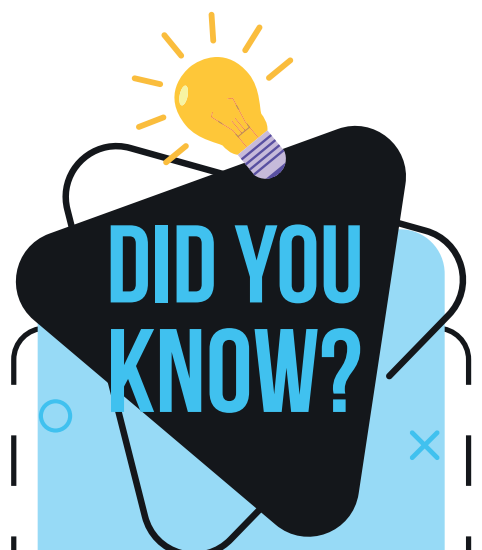
Signapse has close links with the University of Surrey. One of its co-founders, Professor Richard Bowden, has led the Centre for Vision, Speech, and Signal Processing (CVSSP), a research centre focused on sign language technology, for over 20 years. Fellow co-founder Ben Saunders also completed his PhD at Surrey and was greatly supported by the University environment. "We

wanted Signapse to share the same sense of belonging at Surrey and use the Surrey Research Park to achieve this," says Sally. "The team have provided a lot of valuable advice and links throughout our time there so far."

Despite only launching in spring 2022, Signapse has already had a taste of award success. At the beginning of November, the company won the 'Start-Up of the Year' category at the prestigious 2022 Surrey Business Awards. "We were honoured to win 'Start-Up of the Year', particularly given the strong competition in the area," says Sally. "It was gratifying to be rewarded for all our hard work and progress in the first eight months of our journey and drives us on to win more awards in the future!"

So, what does the future hold for Signapse? Well, according to Sally and the team, the potential is huge. "Our next step is to roll out our train announcement solution across the UK, Europe and US to enable Deaf accessibility in the transport sector that is currently lacking. Our horizon mission is towards unconstrained sign language translation, with the ability to generate a signed translation given any English sentence. We have a few technical steps required to achieve this aim but keep your eyes peeled for our progress towards this in 2023."

Beyond the UK, there are 72 million Deaf people around the world – 80% of whom live in the developing world and experience the greatest of barriers. Signapse has its sights set on international expansion to generate significant benefits for the global Deaf community. Watch this space!



### LOCATION:

Guildford, Surrey

### ESTABLISHED:

1985

### KEY SECTORS:

Technology, science, health, space, engineering

### KEY FEATURES:

- Furnished offices of all sizes including shared workspaces and self-contained office units.
- Award winning start-up business support available with on-site incubation hub, SETSquared – the global number one university business incubator.
- Access to R&D funding initiatives, leading advisors, recruitment support and training in addition to links with the University of Surrey's knowledge and talent base to maximise business growth and innovation.
- Facilities include a café, meeting rooms, breakout spaces, picnic areas, parking and preferential rates for nearby Surrey Sports Park.

### HIGHLIGHTS:

- The 210 businesses located on the Park generate over £1billion of economic activity each year and create 4,000 jobs in Guildford.
- A number of tenants have won the Queen's Award for Enterprise, created global industry firsts and pioneered major medical breakthroughs.

### FURTHER INFORMATION:

[www.surrey-research-park.com](http://www.surrey-research-park.com)

**For more information on available properties:**  
01483 579 693 [www.surrey-research-park.com](http://www.surrey-research-park.com)

