

Ploughshare wins government funding for 2 defence technologies

Ploughshare, the company owned by the Ministry of Defence (MOD) that finds new and inspiring uses for government inventions, has won more than £280,000 in grants to develop 2 technologies for the benefit of society.

Ploughshare facilitated successful bids by the Defence Science and Technology Laboratory (Dstl) to the government's new Knowledge Assets Grant Fund. The funds will assist in the development of 2 new technologies – a predictive test for sepsis being developed by Presymptom Health, and a sensor that can detect and identify laser threats from Sentinel Photonics.

The grants, offered by the Knowledge Assets unit in the Department for Business, Energy and Industrial Strategy (BEIS), are to support the repurposing, commercialisation or expanded use of public sector knowledge assets. This is part of the Government's Knowledge Assets initiative which aims to unlock the value of Knowledge Assets for social, economic and financial benefit to the public with a targeted programme of work and support to organisations across Government.

David English, Dstl Chief Finance Officer, commented:

We're delighted that these science and technology innovations developed by Dstl will be further advanced. These 2 examples are indicative of Dstl's commitment to protect lives through superior technology and innovation, while also supporting UK industry.

In the case of [Presymptom Health](#), Ploughshare supported Dstl in securing up to £100,000 from the fund which it will use to contract Presymptom Health to conduct research and development of AI machine learning software. This software could be used to analyse thousands of blood samples in Dstl's biobank, accumulated over 10 years of research.

Initial trials of the technology, first developed for the MOD for use on the front line and now licensed by Ploughshare to Presymptom Health, suggest it can predict the onset of sepsis in patients up to three days before symptoms appear, enabling clinicians to treat them much sooner and manage them more effectively.

Ploughshare also aided Dstl in its bid for £180,000 relating to its work with [Sentinel Photonics](#), which is developing sophisticated technology to detect and protect against laser threats. The technology, licensed to Sentinel by Ploughshare, was developed for military use to detect and assess the threat levels of lasers deployed against personnel, aircraft and vehicles.

Dstl will use the grant funding to contract Sentinel to explore opportunities for civilian use – for example as a method of detection and threat level

assessment when lasers are shone at commercial aircraft such as air ambulances, or at sporting events. The technology could potentially be installed in public areas to detect lasers, acting as a deterrent against their illegal use.

Hetti Barkworth-Nanton, CEO of Ploughshare, said:

We are delighted to have facilitated Dstl's successful applications so that Presymptom Health and Sentinel Photonics can be among the first to benefit from the Knowledge Assets Grant Fund. This fund was created specifically to test the potential of knowledge assets for expanded or alternative use – directly in line with our mission to enable the commercialisation of government defence research for the benefit of society.

These 2 technologies are at a very exciting stage of development, and the support of BEIS and Dstl will enable them to take the next step towards delivering positive societal impact.

Chris Burgess, Sentinel Photonics CEO, said:

We are grateful for the support of Ploughshare, Dstl and BEIS in securing these funds which will enable us to take a significant step in unlocking the potential for our technology to detect and protect against laser threats to civilians. This grant will give us space and time to hold conversations with relevant organisations while continuing to develop and refine our technology.

Iain Miller, CEO at Presymptom Health, said:

As we continue to explore the potential for our technology to provide early diagnosis of sepsis, which claims the lives of up to 11 million people each year around the world, we are grateful for this grant which could enable us to find new ways of detecting tell-tale markers which are an indication for the disease.

Our development of machine learning technology, with the support of Dstl and enabled by the Knowledge Assets Grant Fund, could greatly increase the rate at which we can analyse samples, enabling us to bring this potentially life-saving test into general use more quickly.

Ploughshare, wholly owned by Dstl, has unique access to a wide range of technologies developed by leading scientists and engineers at the MOD and wider government. Since it was founded in 2005 it has licensed more than 140 innovative technologies and created more than 400 jobs.

The [Knowledge Assets Grant Fund](#), operated out of BEIS, offers grants of up to £250,000 to support the repurposing, commercialisation or expanded use of public sector knowledge assets. This aims to realise the potential of these assets for the benefit of the UK. Later this year, a new dedicated unit in BEIS will launch to support knowledge asset development, including a new funding round for the Knowledge Assets Grant Fund.

For more information see www.ploughshare.co.uk