

# Press release: Brand new x-ray technology set for production in the UK

Developed by the Defence, Science and Technology Laboratory (Dstl), the new technology produces higher resolution images while simplifying product design.

The first product to take advantage of the new technology will be the Axi-Tek CSI-100 which will make the inspection of aircraft components quicker and easier due to its reduced size and weight. Future products will cater for applications as wide-ranging as factory in-line and in-field industrial inspection, to security and bomb disposal (EOD).

The new technology improves the mechanism used to control an x-ray beam. Called a collimator, just as a lens focuses light, a collimator directs and filters x-rays to ensure objects are correctly illuminated. This novel design of collimator is much lighter, provides a more consistent beam, and is mechanically simpler to implement.

The CSI-100 will use the advanced technique of detecting reflected x-rays (backscatter) to image objects. This has the advantage that access to only one side of an object is required, allowing operators to inspect, identify and verify the internal structure and contents without needing access to all sides or needing to move it.

Nick Fox, Managing Director of Axi-Tek commented:

We are excited to have secured this novel technology as it now paves the way for a new line of portable backscatter x-ray imaging products. We expect to see the first CSI-100 available to the aviation industry in Q4 next year, with specialist security variants coming online early the following year.

Ploughshare's CEO, James Kirby, added:

This licence deal with Axi-Tek further demonstrates how Ploughshare maximises the investments Dstl has made in Science & Technology by taking defence innovations and finding commercial uses for them. Axi-Tek's unique products will benefit their operators, assist with the public's safety and security, and also create jobs and prosperity.

The technology will be suitable for the inspection of carbon fibre aircraft wings where it can detect impact damage hidden deep in a wing structure. The

CSI-100 will initially be tailored for this non-destructive inspection application for both reinforced carbon and glass fibre components in aircraft structures.

It could also be used in the security industry and will allow operators to quickly investigate the contents of objects and suspicious packages.

Initially funded by a grant from Innovate UK, the CSI-100 is based on more than three years of collaborative research with a team from Axi-Tek, University College London, QinetiQ and Rolls-Royce.

## **Notes to Editors**

### **About Axi-Tek Limited**

Axi-Tek is a UK based specialist SME working in the field of the development of hi-tech x-ray solutions for the industrial and security sectors. Since its formation in 2013, the highly experienced team at Axi-Tek have work in close collaboration with both industrial and academic partners to identify and commercialise emerging technologies taking them from the laboratory to the market place. Exploitation of the resultant products is either through Axi-Tek's sister company, Metrix NDT Limited, or where direct 3rd party commercial sponsorship has been provided, exploited by Axi-Tek's clients.

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### **About Ploughshare Innovations**

Ploughshare Innovations is the technology transfer organisation for the UK Ministry of Defence (MOD). It turns 'swords into ploughshares' by enabling businesses to gain access to defence and security technology developed by leading government laboratories. Ploughshare ensures Government technology is put to good use and benefits the UK, society as a whole, and humanity by applying innovative technology to improve people's lives. Since its creation in 2005, the company has licensed 125 technologies and attracted £140 million of investment.

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### **About Dstl**

The Defence Science and Technology Laboratory (Dstl) works to apply cutting-edge science and technology (S&T) to keep UK Armed Forces, and the British people, protected from harm.

Dstl is an executive agency of MOD, run along commercial lines. It is one of the principal government organisations dedicated to S&T in the defence and security field, with six sites: at Porton Down, near Salisbury; Portsmouth West, near Portsmouth; Fort Halstead, near Sevenoaks; Sandridge, near St Albans; Langhurst, near Horsham; and, Alverstoke, near Gosport.

Dstl works with a wide range of partners and suppliers in industry, in academia and overseas.