

Deeper Scan – a game-changer in hardware validation, threat and anomaly detection

Airports are at risk of falling victim to a wide array of threats, but one that is persistently challenging to overcome is detecting explosives inside baggage. Both from an operational and a governance perspective, airport security is incredibly complex. Authorities need to provide effective, efficient and passenger friendly screening systems, whilst staying ahead of evolving security threats. Airports employ reliable processes and technologies to detect threats in baggage, however, these are invasive for passengers and resource intensive for airlines and airports.

In 2018, DASA launched a themed call: Finding Explosives Hidden in Electrical Items as part of the Future Aviation Security Solutions (FASS) programme managed by the Home Office and the Department for Transport.

Bedfordshire-based NWPRO Ltd received £80,000 to develop Deeper Scan – a whole object detection system which uses innovative artificial intelligence and x-ray technology to scan airline baggage and identify electronic contents, with accurate results ready in less than 15 seconds.

Deeper Scan has received significant interest from major airports, and NWPRO Ltd are working to integrate the technology with off-the-shelf CT scanning capabilities, to reduce the resource burden for airlines and airports.

Jay Richards, Managing Director of NWPRO Ltd said:

During the early stages of product development, it's difficult to get feedback from end users and stakeholders. Being part of a FASS project enabled us to form a bridge between our business and the user which ultimately helped us to develop a better product for their needs.

The technology has also found an additional use in cyber security. Deeper Scan can be used to validate electronic assets, scanning and identifying components within new electronic devices to detect tampered and counterfeit hardware.

This is hugely beneficial for government departments and other official agencies who handle and rely on sensitive information every day, and need to ensure that it is secure at all times. NWPRO Ltd has already received great feedback on their contribution to a safer cyber resilience through the supply chain from Government agencies.

In June 2021, Deeper Scan was selected as one of the UK's most innovative cyber security products in a competition run by the Department for Digital,

Culture, Media and Sport (DCMS), highlighting its capability need.