

## AIRPORT SECURITY AWARD BY U.S. DEPARTMENT OF HOMELAND SECURITY

*Micro-X Inc. selected for two contracts totalling US\$4m for Self-Service Airport Checkpoint development*

**Adelaide, Australia, 4th November 2020:** Australian hi-tech company Micro-X Ltd (ASX:MX1) (**Micro-X** or the **Company**), a leader in cold cathode x-ray technology for health and security markets, is pleased to announce that Micro-X Inc., Micro-X's wholly-owned subsidiary based in Seattle Washington, has been advised by the US Government's Department of Homeland Security (**DHS**) that, following a competitive process, it has been selected for funding for two proposals to develop DHS's new concept for airport Passenger Self-Screening.

### Key Points

- **US Transportation Security Agency screens 2 million passengers daily across 440 US airports**
- **TSA vision is to enable self-service checkpoint with security screening and automated threat detection**
- **Micro-X Inc. first Proposal for up to US\$1.5m to develop self-service baggage scanner (minimum award of US\$0.5 million)**
- **Micro-X Inc. second Proposal for up to US\$2.5m to develop a design for the self-service check-in portal which will be led by Micro-X in a consortium with Elenium Automation, Monash Uni MADA and others (minimum award of US\$1.2 million)**
- **Accelerates, funds and validates Micro-X entry into global airport security markets**
- **Potential US market alone of 8,000 to 12,000 portals is significant future opportunity**

### TSA Passenger Self-Screening Project

The Transportation Security Agency (**TSA**) is an agency of the DHS, created as a response to the September 11<sup>th</sup> attacks, that is responsible for the security of the traveling public in the United States. With a 2021 budget of US\$8.24 billion, the TSA has a workforce of approximately 34,000 Transport Safety Officers who staff airport checkpoints with an annual labour cost of US\$3.5 billion. Each day the TSA screens on average 2 million passengers through 440 US airports using approximately 2,200 deployed X-ray conveyor-belt systems.

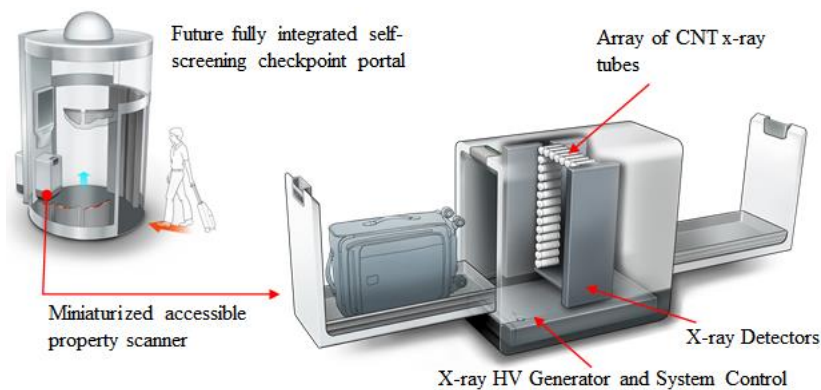
The Passenger Self Screening Project relates to TSA's future vision of replacing the current conveyor belts which use conventional CT or projection x-ray imaging for checkpoint screening of passenger carry-on luggage, with a bank of multiple 'self service' security portals. This new concept of 'self-service' airport checkpoint portals will be similar to current photometric identity portals which match a passenger's passport details with their image and travel documentation, but will add security body-screening for the passenger and also x-ray screening of their carry-on luggage and personal effects with automated threat detection. Under this self-service security concept, it is likely that each current x-ray lane will be replaced by 4 to 6 of these self-screening portals so that the total potential US market is 8,000-12,000 portals. The airport security markets in Europe and the Rest of the World are each similarly sized to the US.

On 30 July 2020, the TSA advertised a Broad Agency Announcement for its Passenger Self Screening Project. Micro-X Inc. submitted White Papers and was then down-selected and invited to submit full proposals for two programmes. These were assessed by a panel of experts in accordance with government guidelines. The work which Micro-X has been undertaking for the UK Government's Department for Transport as part of the 'Future Aviation Security Solutions' program has been aimed at a miniaturised X-ray screening unit for a similar self-service concept in airport checkpoints in the United Kingdom.

## Miniaturised Accessible Property CT Prototype using CNT x-ray technology

The first award by the DHS to Micro-X Inc., for up to US\$1.5 million, is to design and manufacture a prototype self-service baggage scanner. The award of this Proposal is subject to execution of formal contracts with the delivery of a completed prototype of the scanner required within 12 months, after which DHS will undertake 6 months of testing. Once formal contracts are entered, the work will be performed against two phases of work with the minimum amount of US\$0.5 million to be paid to Micro-X to undertake the detailed design of the system over four months and then following a successful design review Micro-X may be awarded an additional \$1.0 million to build a prototype system.

Micro-X's CNT x-ray technology allows for an array of miniature x-ray tubes to be fitted into a small scanner unit providing a high resolution, dual energy, CT image which can be used to enable accurate automated detection of explosives and prohibited items. Fast switching of the X-ray tubes allows high-speed imaging and the software developed by Micro-X on the UK Government program will be used for three-dimensional image reconstruction. The use of dual-energy automated threat detection software means automated decision making is possible with human intervention required only for alarm resolution. The concept of the self service baggage scanner proposed by Micro-X is illustrated below:



## Self Screening Checkpoint Portal Design

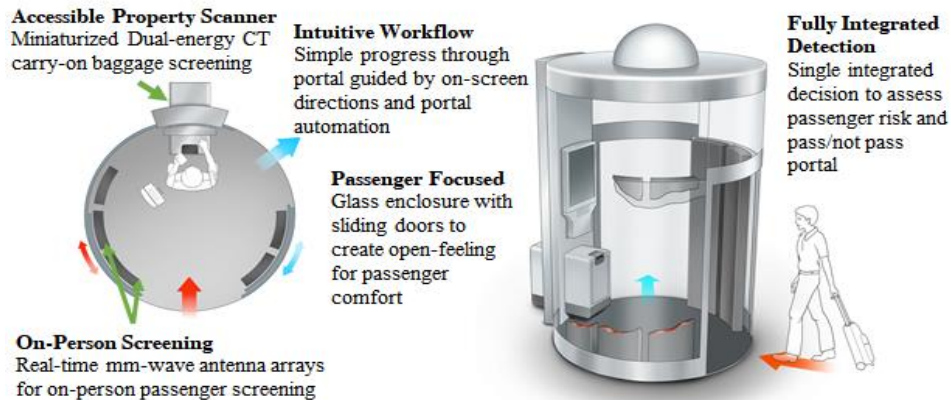
The second award by the TSA to Micro-X Inc., for up to US\$ 2.5 million, is to design the overall security portal system incorporating the X-ray scanner developed under the award described above. This award of is also subject to execution of formal contracts. Micro-X will perform overall systems design and lead an international consortium to deliver an integrated design of the self-service portal, incorporating functional elements of travel document and identity verification, accessible baggage x-ray screening and body scanning. The project will complete with the final system design review by DHS within 20 months.

Once formal contracts are entered, the work will also be performed against two phases of work with the minimum amount of US\$1.2 million to be paid to Micro-X to develop the portal concept over 12 months and then following a successful concept review, Micro-X may be awarded an additional US\$1.3 million to undertake the detailed design of the portal concept.

The consortium led by Micro-X includes two Australian organisations: *Elenium Automation*, based in Melbourne, a company with a large number of self-service passenger automation installations in airports around the world, who will design the system automation, passenger documentation screening, and passenger biometrics to validate the passenger identity. *Monash University MADA*, from Melbourne, will lead design input for human factors and system workflow design based on extensive experience in industrial design.

Other members of the consortium include a German company specialising in microwave and millimetre-wave imaging solutions who will provide design input for the on-person screening subsystem and a US based software company who will provide a software platform to unify data, users, and operations from across the self-screening portal to empower data-driven decision making streamlining and automating the screening process.

The concept of the proposed portal design is illustrated below:



The award of both these contracts with DHS and commencement of work, is expected in Q1 2021. Dr Brian Gonzales, the Company's Chief Scientist and also CEO of Micro-X Inc., is based in Seattle, Washington, US. Dr Gonzales will lead these programmes including the addition of imaging and software engineers in Seattle to execute the sensitive areas of these proposals. The X-ray and imaging system elements of the proposals will be undertaken in Adelaide. There are no assurances from the DHS of future ordering beyond the anticipated contracts.

Micro-X's Managing Director, Peter Rowland, commented:

*"We are thrilled to have been selected by DHS for both these projects as this will hugely accelerate entry of our proprietary CNT technology into the global security market. Building on the work we have done for the UK Government we believe our CNT technology is unique in being able to deliver this miniaturised x-ray automated detection functionality for airport security. I'm really proud that Micro-X's customer-led design approach has also been recognised in being asked to perform the top level system design of the complete check-in portal."*

*This TSA project stands to revolutionise the passenger experience and improve airport security detection world-wide. Current airport checkpoint security systems are very manpower-intensive and this self-service concept stands not only to massively reduce operational costs but provide a much safer checkpoint process for passengers in the post-COVID-19 world. With a potential 8,000 to 12,000 self service check-in portals in the US alone, this is a significant future market opportunity for Micro-X."*

*This award by the TSA is another strong validation of the work which Micro-X has been doing for many years and a sign that the future of breakthrough x-ray imaging systems will be based on our CNT technology."*

This ASX Announcement is authorised by the Board of Micro-X.

– ENDS –

## About Micro-X

Micro-X Limited (the **Company**) is an ASX listed hi-tech company developing and commercialising a range of innovative products for global health and security markets, based on proprietary cold cathode, carbon nanotube (CNT) emitter technology. The electronic control of emitters with this technology enables X-ray products with significant reduction in size, weight and power requirements, enabling greater mobility and ease of use in existing X-ray markets and a range of new and unique security and defence applications. Micro-X has two mobile digital medical X-ray systems being sold commercially for diagnostic healthcare applications and Micro-X medical products are now in operation in 14 countries around the world.

Micro-X has a portfolio of innovative products in development, including the MBI for imaging Improvised Explosive Devices in security, defence and counter-terrorism applications; a next-generation self-service X-Ray Airport Checkpoint Portal with an integrated body scanner; and a lightweight brain CT imager for early stroke diagnosis in ambulances. Micro-X has its core R&D, engineering and production capability in Adelaide, Australia with a fully in-sourced CNT tube manufacturing line and approximately 95% Australian locally manufactured content.

## CONTACTS

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