



# EXPLOSIVE DETECTION IN AVIATION SECURITY

## The issue and the position - Risk and Regulatory Situation

From a risk perspective, the introduction of an Improvised Explosive Device (IED) into a security restricted area of an airport, and onto an aircraft, by a person (passenger, crew, staff) including in a baggage (cabin baggage, hold baggage and any other personal or professional items) is considered as high risk in the ICAO Aviation Security Global Risk Context Statement (ICAO Doc10108–Restricted).

In the ICAO Annex 17 (Amendment 17, applicable July 2020), the IED challenge is addressed by several standards related to explosives' detection when screening passengers, staff, cabin and hold baggage. Firstly, several standards impose an overall screening for identifying and detecting all potentially dangerous items, devices or substances, including weapons and explosives that can be used to attack civil aviation operations (4.1.1, 4.2.5, 4.4.1, 4.5.1). Secondly, more specific additional standards were introduced in the last two Amendments requiring the deployment of appropriate screening methods capable of detecting explosives and explosive devices, either continuously or in an unpredictable manner (4.2.6 and 4.4.2).

Note that cargo, mail and other goods are still subject to the supply chain security concept and security controls including, where practicable screening. Additionally 4.6.10 has already provided for risk-based foundation in cargo screening stating the method should be adjusted to the nature of shipment. Obviously, the major threat in cargo are IEDs.

Therefore, it is reasonably expected States have robust explosive detection capacities in place for the above-mentioned areas overlaid by randomness and unpredictability in the implementation of security measures (4.1.2) .

## Background information

States, airports and security service providers could select the equipment and software providing for most effective and efficient screening among a large variety of technologies, ranging from multi-view x-ray or Computer Tomography (CT) with explosive detection algorithm (for explosive detection systems or EDS), security scanners, Explosive Trace Detectors (ETD), Explosive Detection Dogs (EDD), in addition, or combination with the traditional Walk-Through Metal Detection (WTMD) for persons. They also have the choice of implementing different effective and innovative processes and procedures adapted to local situations and environment, forecasted traffic, considering available resources.

## Proposed solution

IATA and its member airlines:

- Request the urgent deployment of effective and sustainable explosive detection screening capabilities for all screening processes (primary, originating, transfer, staff) to comply with all explosive detection provisions contained in the latest Amendment to Annex 17. Deployment and implementation should envisage proper maintenance of the equipment;
- Encourage states and stakeholders to consider differentiation of screening requirements based on global and local risk assessment in order to prioritize resources where mostly needed;
- Call for simple mechanism to recognize explosive detection capabilities' equivalence, between different types of equipment/software to allow more effective implementation and use technology as good as we can;
- Encourage security equipment manufacturers and other stakeholders to explore the open architecture concept and how it could be applied in the EDS software developments;
- Acknowledge the human factor remains a key for the effective security system in these turbulent times. IATA urges for facilitation of training and certification processes and calls regulators for recognition of best managerial and performance monitoring practices. This should allow better workforce utilization and help to prevent undesired turnaround or staff shortages.