

UNCLASSIFIED



**D5.1**  
**Case study Weapons and Explosives detection:**  
**Selected Products for modes 1 & 2**

***EXECUTIVE PUBLISHABLE SUMMARY***

A report prepared by:  
**Fraunhofer ICT**  
**TNO**  
**FOI**  
**Iconal Technology Ltd**

Date: 2016-03-17  
Project No: 606861  
FOI Designation No: FOI-2012-1271  
Dissemination Level: RE  
Total No of Pages: 3

---

This project has received funding from the European Union's  
Seventh Framework Programme for research, technological  
development and demonstration under grant agreement no 606861.

UNCLASSIFIED



## Case study Weapons and Explosives detection: Selected Products for modes 1 & 2

### *EXECUTIVE PUBLISHABLE SUMMARY*

Version: 1.0 – Executive Publishable Summary  
FOI designation no: FOI-2012-1271  
Responsible: Fraunhofer ICT  
Authors: Fraunhofer ICT: Christian Ulrich, Frank Schnürer;  
TNO: Martijn Koolloos, Erik Kroon  
FOI: Anders Elfving, Jonas Tidström, Anneli Ehlerding;  
Iconal Technology Ltd: Mike Kemp  
Number of pages: 3  
Dissemination level: *RE – Restricted to a group specified by the consortium  
(including the Commission Services)*



## Executive Summary

HECTOS is an EU FP7 security research project that is exploring the issue that there are very few test, evaluation and certification procedures in Europe for physical security products that are mutually recognized by different Member States. As pointed out in the EC Communication on Security Industrial Policy, this leads to fragmentation of the market, with negative impacts on both suppliers and users. HECTOS will identify mechanisms to evaluate the performance of security products, as well as compliance with interoperability, regulatory, ethical, privacy and other requirements. The project will develop elements for a roadmap for the development of new harmonised product certification schemes.

By conducting two case studies in the priority areas “Biometrics” and “Weapons and Explosives Detection” HECTOS will enhance and experimentally validate evaluation and certification schemes developed in WP3.

Deliverable D5.1 describes the preparative work for the “weapons and explosives detection case studies” of WP 5 and provides an overview of current products and product types for this case study, which includes the two modes:

- 1) Explosives particle trace detectors and
- 2) Weapon and explosives detection devices for person screening

It also discusses issues for harmonised evaluation and certification for the physical security products in this case study.

First, some aspects of the E&C schemes which this case study might be able to address were given, such as (performance) test methods, and other aspects concerning requirements, validation, use of results etc. It was also discussed how low-TRL products can be included in the case study.

Second, an overview of currently available products was provided for explosives particle trace detectors and weapon and explosives detection devices for person screening. Since the final selection of products will take place during the course of WE5.2 and WE5.3, it was only indicated which products could, in principle, be used for the case studies. I.e., the actual physical tests of trace detectors depends on the availability of IMS- or MS-based detectors as well as detectors based on chemoluminescence or fluorescent amplifying polymer. For the paperwork studies, all different types of ETD-systems will be assessed. For the weapons and explosives detection devices, the final selection depends mainly on the availability of equipment at HECTOS’ third party partner BAVAK, but likely it will be walk-through metal detectors and/or millimeter wave portals.

Finally, some relevant scenarios in which the products might be used were specified.