



RESEARCH PROJECT EASA.2022.HVP.04

Impact of Security Measures on Safety

IDENTIFICATION OF THE MAIN SECURITY THREATS AND SCENARIOS (PHYSICAL THREATS AND INFORMATION SECURITY THREATS) HAVING AN IMPACT ON AIRCRAFT SAFETY D-2.1

Executive Summary

The report provided the deliverable D-2.1 of task 2.

D-2.1 "*Identification of the main security threats and scenarios (physical threats and information security threats) having an impact on safety*".¹

The intent of this document was not to duplicate or challenge the well-established risk assessment mechanisms that currently exist for aviation security at an international, regional or state level. The purpose of this report was to harness the collective understanding of aviation security threats and to map those known threat scenarios against the broad areas of safety and security interdependencies identified in D-1.1.

The intention of this activity was to provide a basis for better understanding of where security threats have safety consequences in a more granular way than is currently understood. It was accepted that any act of unlawful interference that results in a catastrophic event is a negative safety event. The purpose of this report was to understand this dynamic in a methodological and more nuanced manner.

Taking the Aviation Security Global Risks Context Statement (ICAO Doc 10108, henceforth referred to as 'RCS') as a commonly recognised set of threats, it has been challenged and complemented based on a global mapping of aviation fields. The report considered additional sources on the latest threat developments and evaluation, such as IATA, ICAO publications and dedicated support of subject matter experts in the fields of safety and security. A final list of 36 threats scenarios, along with associated existing security measures, was developed and cross-referenced against the safety areas previously identified as having a security interdependency (D-1.1 – '*Report on safety areas affected by security*'). The cross-referencing facilitated the identification of security threats that impact aircraft safety.

¹The information contained in the report was classified as "Sensitive non-classified releasable to Specific Parties" in accordance with EASA Security Policies and was restricted to a group specified by the Contracting Authority in line with the requirements of the research contract EASA.2022.HVP.04.

The Executive Summary is intended to inform the public about the implementation of the research and the main results, including the key findings.

This report, along with the inputs from D-1.1 and D-1.2, will serve as the foundation for the more detailed evaluation of security measures affecting safety in D-2.2 and D-2.3. These comprehensive assessments will aid in identifying both positive and negative impacts of security measures, as well as defining the elements and measures that are currently missing to ensure better safety outcomes.

This report will also consider the following to be assessed in D-2.2 and D-2.3, highlighting their impact on safety:

- Current evolutions of the aviation environment (e.g. traffic collision avoidance systems, gradual replacement of ground-based navigation systems (VOR, DME) and communication systems (VHF, HF, satellite-based communication, navigation systems), to deepen the current analysis with the support of experts in those domains.
- Planned changes in the organisation of operations, airspace, navigation and communication means for urban areas. This will enable stakeholders to provide feedback and expertise in order to focus on this list of (to be agreed in D-2.2) interdependencies, following a knowledge-based assessment method which will be described in D-1.3.

This approach will enable a holistic and comprehensive analysis of the positive or detrimental impact security measures are having on overall safety and the identification of opportunities for improvement.