

# Impact of Security Measures on Safety



## Contractor

CAAi

## Consortium Members

APAVE

CASRA

## Contract period

05/10/2022 - 04/10/2025

## Budget

1 264 580€

Scan the QR code or [click here](#) to visit the webpage of this project



## Main objectives:

The primary goal is to comprehensively grasp the interplay between safety and security, evaluating how security measures influence safety within aviation. This involves discerning the processes, job roles, certification requirements, and licensing activities affected by safety-security interdependencies.

Over the medium term, the project aims to develop safety risk management techniques that could be potentially applicable to security, fostering harmonized risk assessments. This will, in turn, support integrated policy and decision-making processes at both national and EU levels.

The four main tasks of the research are:

- Task 1: Identify the interdependencies between security and safety
- Task 2: Assessment of the impact of security measures on safety
- Task 3: Analysis of certification standards
- Task 4: Integrated risk management

The principal outcome is a robust knowledge base facilitating the assessment of security measures' potential impact on the safety aspects of aviation systems, personnel, and operations. This includes the identification of key indicators for measuring such impacts, whether positive or negative, and elucidating the primary factors contributing to these security-safety dependencies.

The project thus strives to enhance the understanding and management of the intricate relationship between safety and security within the aviation domain.

## Impacts & benefits

The project aims at developing a comprehensive knowledge base for the evaluation of the potential impact of security measures on the safety performances of aviation systems, personnel and operations, including the leading indicators for measuring such an impact (positive or negative) as well as the main factors playing a role in such security-safety dependencies.



# Impact of Security Measures on Safety



## Further reading

Aligned with ICAO Annex 17 on Aviation Security, Standard 2.1.1, each Contracting State's principal objective is prioritizing the safety of passengers, crew, ground personnel, and the general public in all matters related to safeguarding international civil aviation against unlawful interference. Herein, aviation security is positioned as a contributing factor to safety, and research action A6 frames aviation security measures from this safety-oriented standpoint. The implementation of various aviation security measures can have direct or indirect repercussions on safety aspects related to aerodromes, air operations, and aircraft design.

Interdependencies between safety and security become particularly evident in areas such as aerodrome security, aircraft security, cargo, mail, and in-flight security. Here, security requirements must consider potential impacts on aviation safety. Identifying which areas of aviation safety are influenced by security measures, and discerning whether these impacts are positive or negative, becomes imperative in ensuring the overall safety of the traveling public.

Examples of such interdependencies are illustrated by the reinforced flight crew compartment doors and their implications for pressure equalization during rapid decompression. Additionally, the separation of systems can impose requirements for the segregation of redundant systems in aircraft areas that are already constrained. This might lead to challenges in meeting other safety requirements.

Security measures in this context encompass those currently in place, those used in the recent past, or part of pre-existing measures that might be activated in response to changing security threat levels. Many aviation job roles inherently involve responsibilities in both safety and security domains. Taking both areas into consideration is important not only to understand the impact on the personnel workload but also on their behaviours, attitudes, and potentially conflicting priorities. Unraveling the extent of safety and security interdependencies, understanding their nature and effects, proves challenging and necessitates a comprehensive understanding of security and safety processes and the tasks integral to individual job roles.

The overarching goal of this research project is to comprehensively understand the interconnections between safety and security, evaluating how security measures impact safety. This involves identifying affected processes, job roles, certification requirements, and licensing activities. In the medium term, applying safety risk management techniques to security may help to create unified risk assessment methods, supporting integrated policy and decision-making at national and EU levels. The project strives to build a knowledge base assessing the potential impact of security measures on the safety of aviation systems, personnel, and operations. It aims to define leading indicators for measuring this impact, both positive and negative, and elucidate key factors in security-safety dependencies.

This project is part of the portfolio of EASA managed research projects funded under the European Research Programmes. Projects under this portfolio address research needs of civil aviation authorities and are geared to generate mid-term benefits after the successful completion of the project to enhance safety, security and sustainability.

