

HUCAN

HOLISTIC UNIFIED CERTIFICATION APPROACH FOR NOVEL SYSTEM BASED ON ADVANCED AUTOMATION AND ARTIFICIAL INTELLIGENCE

OBJECTIVES



Landscape of advanced automation within the EU digital strategy for mobility and ATM



EU legal and regulatory framework on certification of advanced-automated and autonomous technology, including AI-powered solutions, in aviation and ATM



Holistic approach to approval and certification of automated systems



Preliminary guidelines for advanced automation systems design and toolkit for application

OVERVIEW

The HUCAN project will develop a novel, holistic certification approach tailored to highly automated ATM airborne and ground systems, including those based on AI. The method and guidelines proposed will aim at supporting the definition of new standards for transparency, certification, and approval processes, ensuring the highest levels of safety and efficiency in the aviation sector. HUCAN's approach to certification will be designed, developed and tested through case studies on dynamic airspace use and capacity on demand.



SUPPORTED BY
sesar
JOINT UNDERTAKING



Co-funded by
the European Union

This project has received funding from the SESAR 3 Joint Undertaking under grant agreement No 101114684 under European Union's Horizon Europe research and innovation programme.



Join our
community!

CASE DRIVEN APPROACH

Four case studies will be used to support the design and the validation of the holistic and unified approach to certification defined by the project and of the preliminary guidelines for advanced automation systems design and toolkit for application.

1

DYNAMIC AIRSPACE SECTORING

Improvement of middle airspace utilisation obtained by means of dynamic optimization of the airspace sector configuration

2

AI-POWERED DIGITAL ASSISTANT IN TMA

The DA goal is to enhance runway efficiency by optimizing aircraft routing, ensuring adherence to procedures, and preventing potential conflicts



DYNAMIC AIRSPACE RECONFIGURATION SERVICE FOR U-SPACE

Dynamic U-Space volumes definition and information exchanges between ATM and U-space

3

DYNAMIC ALLOCATION OF TRAFFIC BETWEEN ATCO AND SYSTEM

Improvement of upper airspace utilisation by means of dynamic allocation of traffic between the ATCO and automation

4

CONTACT US

Project Coordinator

Paola Lanzi

paola.lanzi@dblue.it

Dissemination and Communication Manager

Serena Fabbrini

serena.fabbrini@dblue.it

FOLLOW US



HUCAN



HUCAN project



<https://research.dblue.it/hucan/>