HUCAN

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

September 2023 – February 2026

OVERVIEW

The HUCAN project aims to pioneer certification methods for new ATM systems with a focus on human centred advanced automation and AI technologies. The HUCAN approach to certification will be tested through case studies on dynamic airspace use and capacity on demand.

OBJECTIVES

- Landscape of **advanced automation** within the EU digital strategy for mobility and ATM
- Robust EU **legal and regulatory framework** on certification in aviation and ATM
- Methods and procedures for **certification of highly automated systems**
- Specific **guidelines and toolkit** for advanced automation-based ATM systems design

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

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

3

DYNAMIC AIRSPACE RECONFIGURATION SERVICE FOR U-SPACE

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

4

DYNAMIC ALLOCATION OF TRAFFIC BETWEEN ATCO AND SYSTEM

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

LET'S KEEP IN TOUCH! Join the HUCAN community!

sesar JOINT UNDERTAKING

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Consortium:

deepblue consulting & research · EUI · CIRA Centro Italiano Ricerche Aerospaziali · nlr · DLR · d-flight enabling autonomous flight