

EASA Artificial Intelligence (AI) Roadmap

David Waller

EASA Representative in Southeast Asia

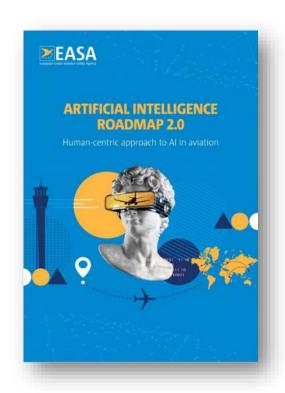
david.waller@easa.europa.eu

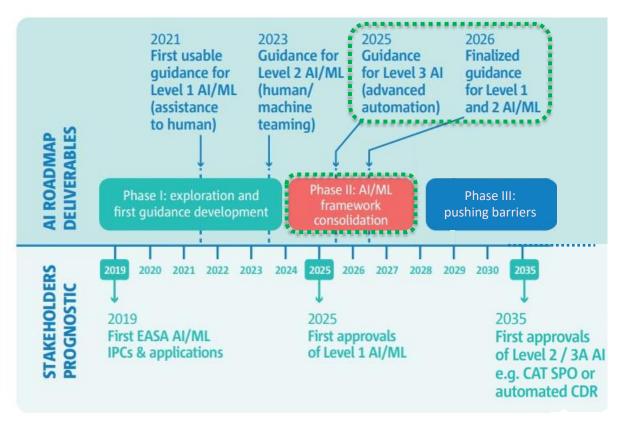
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EASA AI Roadmap 2.0: consolidation phase







EASA AI Concept Paper – Publication of Issue 02



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Figure 3 — EASA AI trustworthiness building blocks



Al Roadmap 'consolidation phase' overview

→ Continued exploration

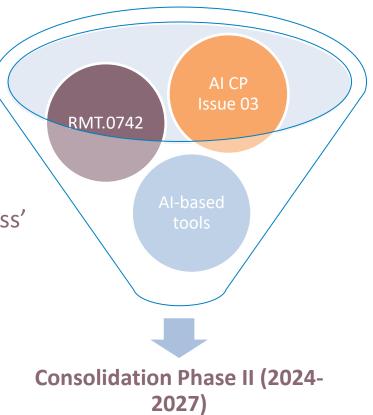
- → Al technical scope extension
- → Advanced automation

→ Rulemaking

→ RMT.0742 on 'Al trustworthiness'

\rightarrow Al and tools

→ Trustworthy AI tools





Technological scope of AI requiring guidance

Artificial intelligence (AI)

Technology that, for explicit or implicit objectives, **infers from the inputs received how to** generate outputs such as predictions, content, recommendations or decisions that can influence physical or virtual environments.

E.g. Regression analysis or clustering

E.g. Computer vision or natural language processing

Machine learning (ML)

Algorithms whose performance improves as they are exposed to data. This includes supervised, unsupervised and reinforcement learning techniques

Deep learning (DL)

Subset of machine learning in which multilayered neural networks learn from vast amounts of data

Logic- and knowledgebased (LKB) approaches

Approach for solving problems by drawing inferences from a logic or knowledge base. This includes knowledge representation, inductive (logic) programming, knowledge bases, inference and deductive engines, (symbolic) reasoning and expert systems, search and optimisation methods.

Hybrid Al

Techniques mixing any of the three approaches (ML and LKB)

E.g. knowledge representation and reasoning system

E.g. neurosymbolic reasoning or LLMs



Collaborative approach with all Stakeholders



AI/ML Guidance



Use Cases (IPCs, MoUs, first applications)





















Horizon Europe MLEAP (Machine Learning Application Approval)







WG-114/G-34



















LUFTHANSA GROUP



Overview of concrete AI/ML use cases in aviation















Airworthiness and air operations

Visual traffic

Computer

A/C

Computer

Flight training

Computer

ATM/ANS

Conflict Detection

Flow

+ Natural Language **Processing** Aerodromes

Detection of Foreign Object Debris (FOD) on runway or wildlife

Computer

Drones & Innovative Air Mobility

Detection of obstacles on delivery pad

> Detect and avoid

Computer

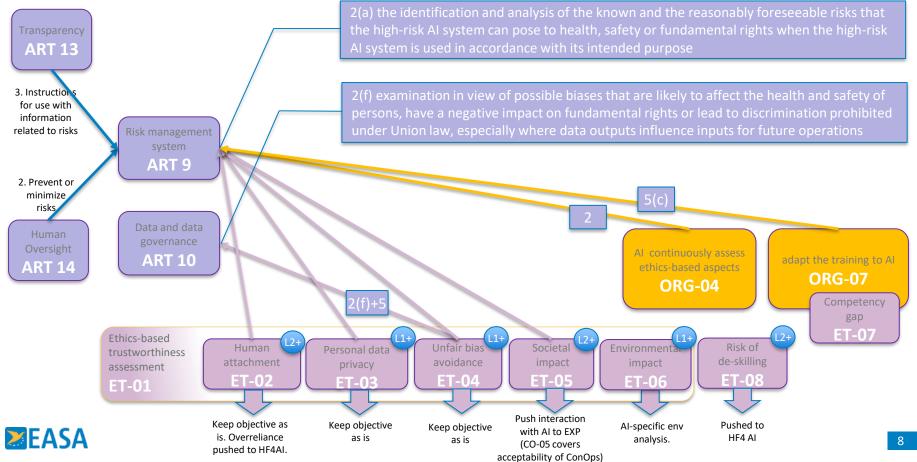
U-space

U-space

conflict management



Ethics-based assessment – guidance concept





Thank you for your attention

Please help shape our rules - NPA 2025-07

david.waller@easa.europa.eu



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