

Business Jets Workshop 2025



21st – 22nd January 2025
EASA Headquarters
Cologne, Germany

#easabusinessjets

*"The **EASA AI Roadmap and Concept Paper** provide a framework for the development of safe and trustworthy AI applications in aviation, guiding applicants through a risk-based approach and promoting a unified understanding of AI within the aviation community, while maintaining a practical and proactive approach."*

Guillaume Soudain

EASA Programme Manager –
Artificial Intelligence



Overview of concrete AI/ML use cases in aviation



Airworthiness and air operations

Visual Landing guidance

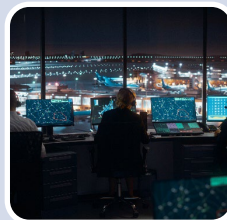
Computer vision



Flight training

Assessment of training performance

Computer vision

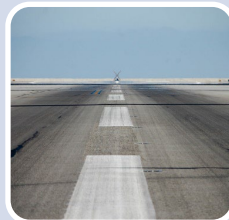


ATM/ANS

Conflict Detection and Resolution

Optimisation

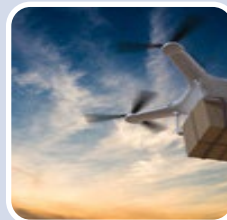
+ Natural Language Processing



Aerodromes

Detection of Foreign Object Debris (FOD) on runway

Computer vision



Drones

Detection of object on delivery pad

Computer vision



U-space

Support to U-space management

Optimisation



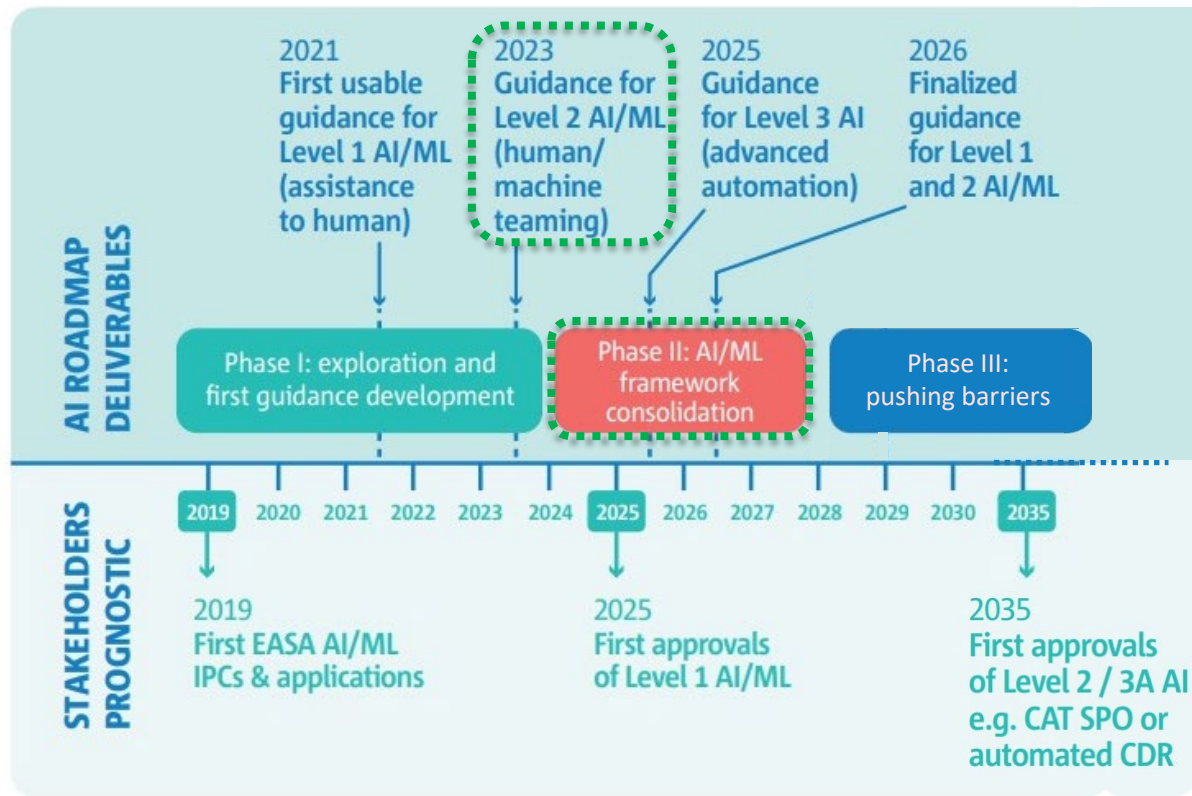
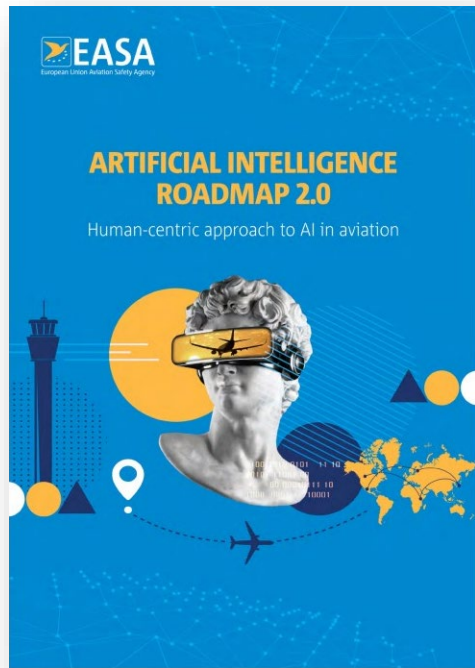
Innovative Air Mobility

Advanced automation

Computer vision

+ Reasoning element for Level 3 AI

EASA AI Roadmap 2.0: entering consolidation phase



Scope of technology covered by Roadmap 2.0

E.g. Regression analysis or
data processing

Scope limited to a safe subset :
- \leq major failure contribution
- offline learning (no learning in operations)

Artificial intelligence (AI)

Technology that can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations or decisions influencing the environments they interact with

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

Hybrid AI

Techniques mixing any of the three approaches (ML, LKB or statistical)

Logic- and knowledge-based (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

Statistical approaches

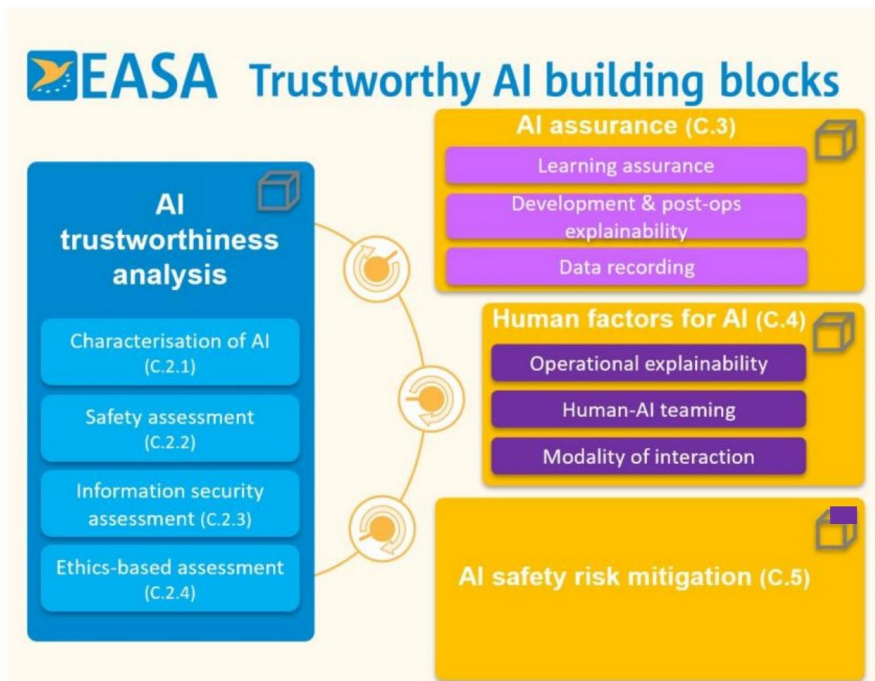
Traditional statistical approaches where a series of predetermined equations are used in order to find out how to fit the data. This includes Bayesian estimation, search and optimisation methods.

E.g. Expert systems

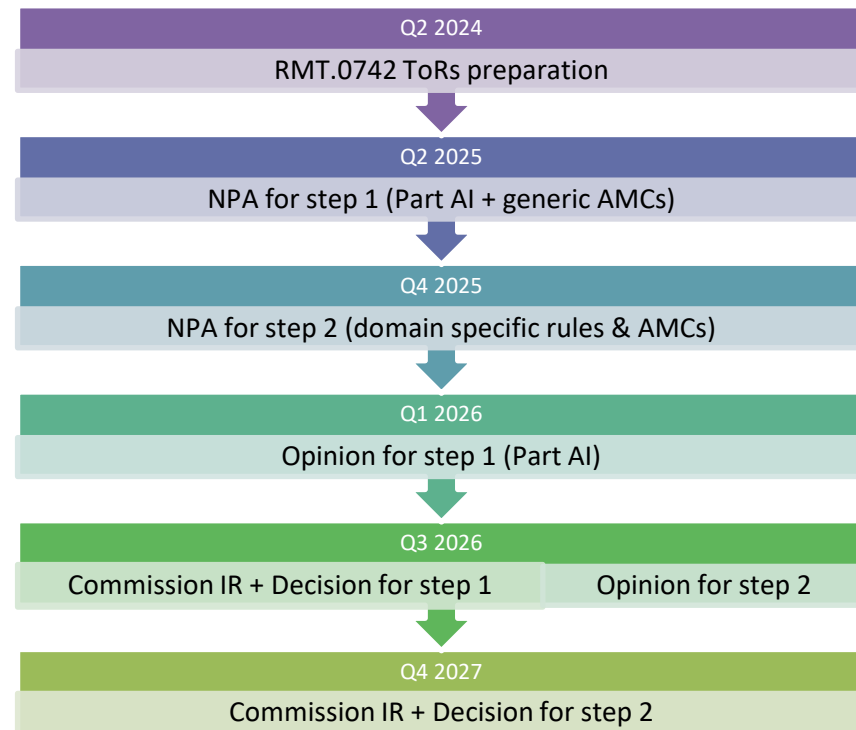
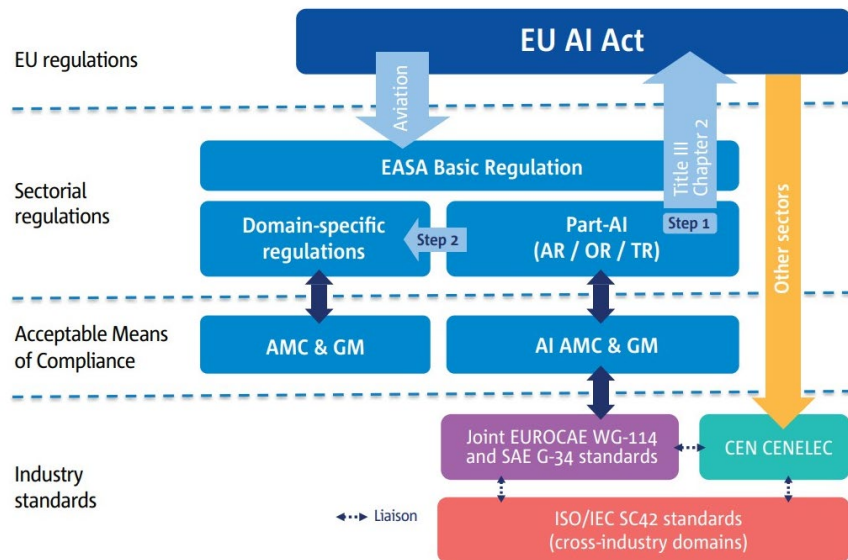
E.g. neuro-symbolic reasoning

E.g. Bayesian estimation

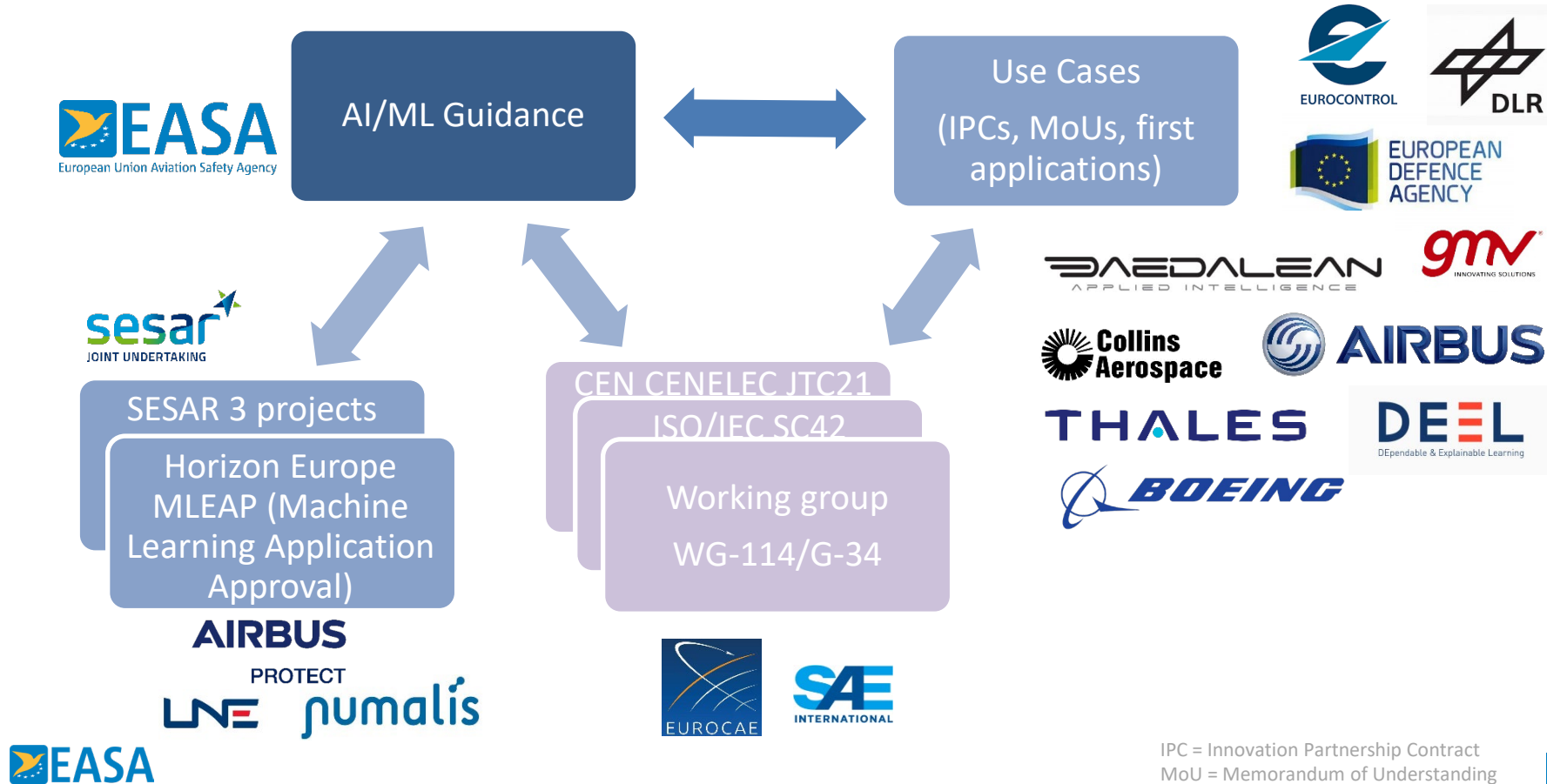
AI Concept Paper Issue 02



Rulemaking plan for AI



Collaborative approach with all Stakeholders



Thank you for your attention!

Any further questions?

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