

EUROCAE
SAE INTERNATIONAL

**EUROCAE WG114 – SAE G34: a joint
standardization initiative to support Artificial
Intelligence revolution in aeronautics**

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Objective & Scope of EUROCAE WG-114

- ❑ **Creation: June 2019 (KOM end of August 2019)**

- ❑ **Objective: establish common standards, guidance material and any related documents required to support the development and the certification/approval of aeronautical safety-related products based on AI-technology**

- ❑ **Scope:**
 - ❖ Airborne: Aircrafts and UAS
 - ❖ Ground: UTM, ATM and Air Traffic Solution

A joint group with SAE G-34 (AI in Aviation)

500+ engineers

Researchers and AI scientists from across the globe, with representation from regulators and authorities (FAA, EASA, TCCA, ANAC, EDA, NASA, DOD, EUROCONTROL), major airframers, UAS/UAM/eVTOL manufacturers, engine manufacturers, component manufacturers, technology providers, and other stakeholders, including operators and airlines

Special thanks to all contributors

G-34/WG-114 focuses on implementation and certification related to AI technologies for the safer operation of aerospace systems and aerospace vehicles.

G-34/WG-114 (comprised of 500+ members) promotes and standardizes Artificial Intelligence in the entire aviation ecosystem (both Airborne and Ground) addressing both manned and UAS.

G-34/WG-114's Global contributors: Boeing, Airbus, ATR, Embraer, Textron, Gulfstream, Dassault, Mitsubishi, Lockheed, Northrop Grumman, GA-ASI, HondaJet, Daher, IAI, ICAO, FAA, EASA, TCCA, ANAC, DGAC, CAA UK, CAA NZ, JCAB, ENAC, FOCA, DOD, EDA, Lilium, Aerion Supersonic, Amazon, DXC, SAP, IBM, Joby, EUROCONTROL, NASA, EDA, Honeywell, Collins, Thales, GE, P&W, RR, Safran, Raytheon, BAE, Elbit, L3Harris, Iridium, Japan Manned Space Systems, FedEx, UPS, AF-KLM, Nodein, Lufthansa, Audi, Toyota, IATA, Leonardo, Leidos, NVIDIA, Intel, Saab, Volocopter, ANSPs, Skyguide, Searidge, Woodward, Vertical Aerospace, Diehl, ADB Safegate, AVSI, ANSYS, BNAE, Copenhagen Airports, D-Risq, Daedalean AI, KIAST, Infosys, Afuzion, Patmos Engineering, QinetiQ, RelmaTech, Rockdale Systems, DLR, drR2, Federated Safety, MathWorks, SRI, Oak Ridge National Lab, etc.

Works In Progress and deliverables:

AS6983 Process Standard for Development and Certification/Approval of Aeronautical Safety-Related Products Implementing AI

AIR6987 Artificial Intelligence in Aeronautical Systems: Taxonomy

AIR6988 Artificial Intelligence in Aeronautical Systems: Statement of Concerns

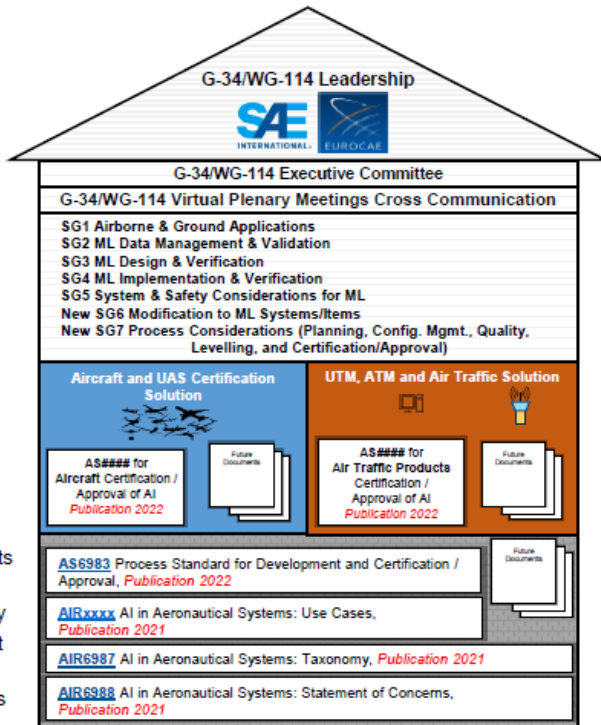
AIRxxxx Artificial Intelligence in Aeronautical Systems: Use Cases Considerations

For more information and/or membership registration, contact: jordanna.bucciare@sae.org and/or anna.quegan@eurocae.net.

SAE INTERNATIONAL

Joint International Committee on Artificial Intelligence in Aviation Ecosystem

EUROCAE



Liaisons with other Groups

(*) active ones are bolded

- **EUROCAE**

- **WG-63 (Complex A/C systems)**
- **WG-72 (Aeronautical Systems Security)**
- WG-105 (Unmanned A/C Systems - UAS)
- WG-112 (Vertical Take-Off and Landing – VTOL)
- WG-117 (Topics on SW advancement)

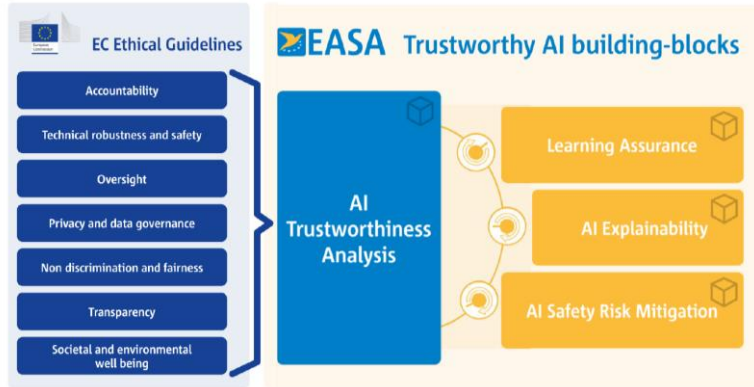
- **SAE**

- **S-18 (Complex A/C systems & UAS Autonomy)**
- **G-32 (Cyber Security)**

- **Others**

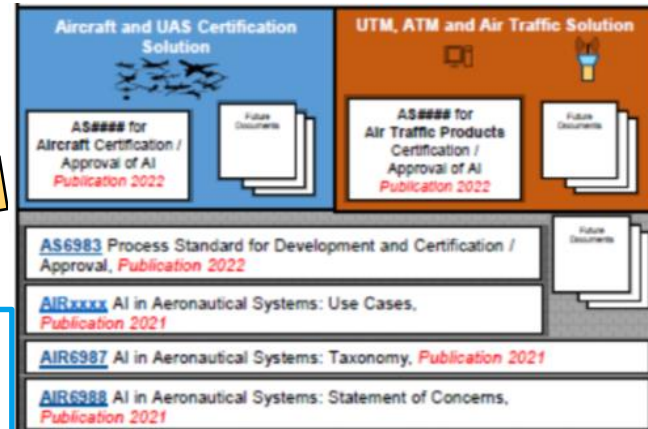
- **AVSI - AFE87**
- **EUROCONTROL AI High Level Experts Group**
- **ISO/IEC JTC 1/SC 42**
- **French Grand Defi CONFIANCE.AI**
- JARUS (Joint Authorities for Rulemaking on Unmanned Systems)
- ASTM

EC / EASA Challenges for AI Trustworthiness

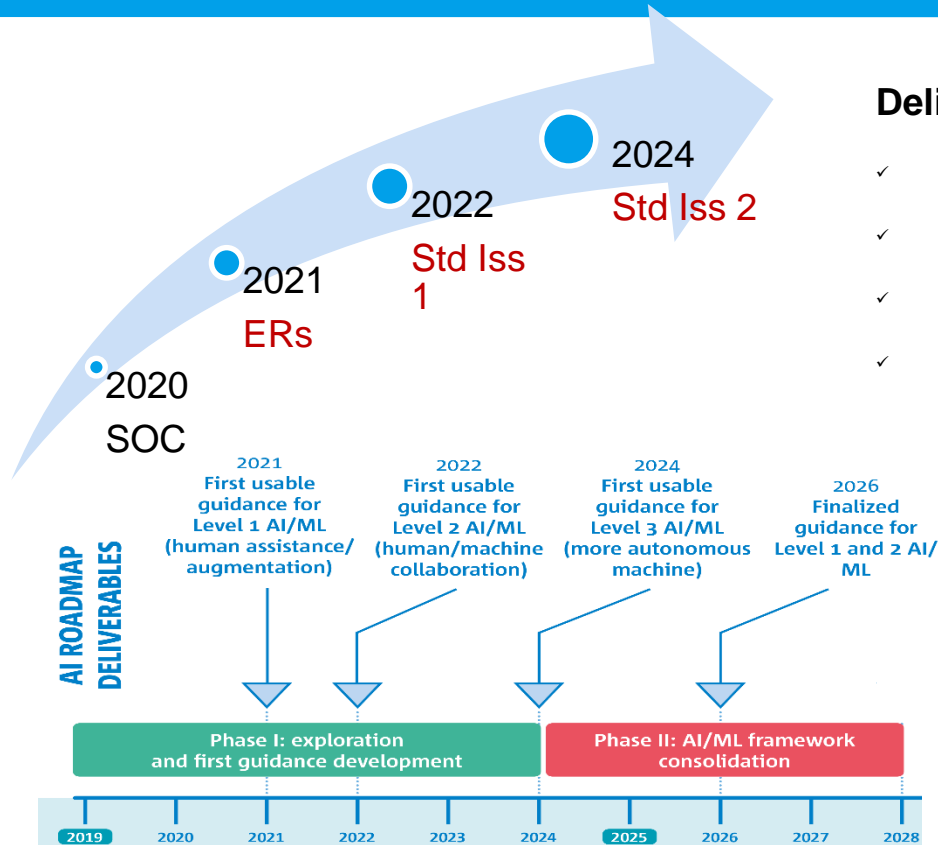


EC / EASA => High level objectives / framework for ML development and approval

WG114/G34 => detailed technical industry standards for ML development and approval



WG-114/G-34 Roadmap



Deliveries

- ✓ SOC (Statement of Concerns) – ER/AIR
- ✓ Taxonomy, Use Cases – ER/AIR
- ✓ Std Issue 1: ML (Offline Learning) – ED/AS
- ✓ Std Issue 2: Other AI Technologies – ED/AS

THANK YOU FOR YOUR ATTENTION !

Questions ?



Source: <https://xkcd.com/>