

Panel 1: Certification Requirements for Innovation

Bringing Innovation to Market

Moderated By:

Vincent De Vroey

ASD

Civil Aviation Director

Panellists:

Rachel Daeschler

EASA

Certification Director

Lirio Liu

FAA

Executive Director – Aircraft Certification Service

Roberto Honorato

ANAC Brazil

Head of Airworthiness Department,

Markus Kochs-Kämper

Heart Aerospace

Head of Design Organisation,

Peter Lyons

Overair

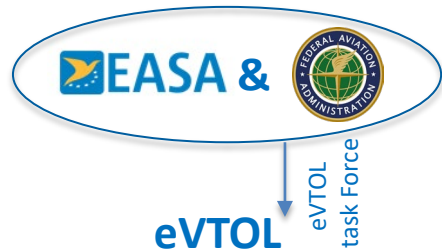
Head of Certification







- Special Condition : Electrical VTOL
- Special Condition: Electric/ Hybrid Propulsion System
- Special Condition: Light UAS
- Special Condition: Gyroplane



eVTOL

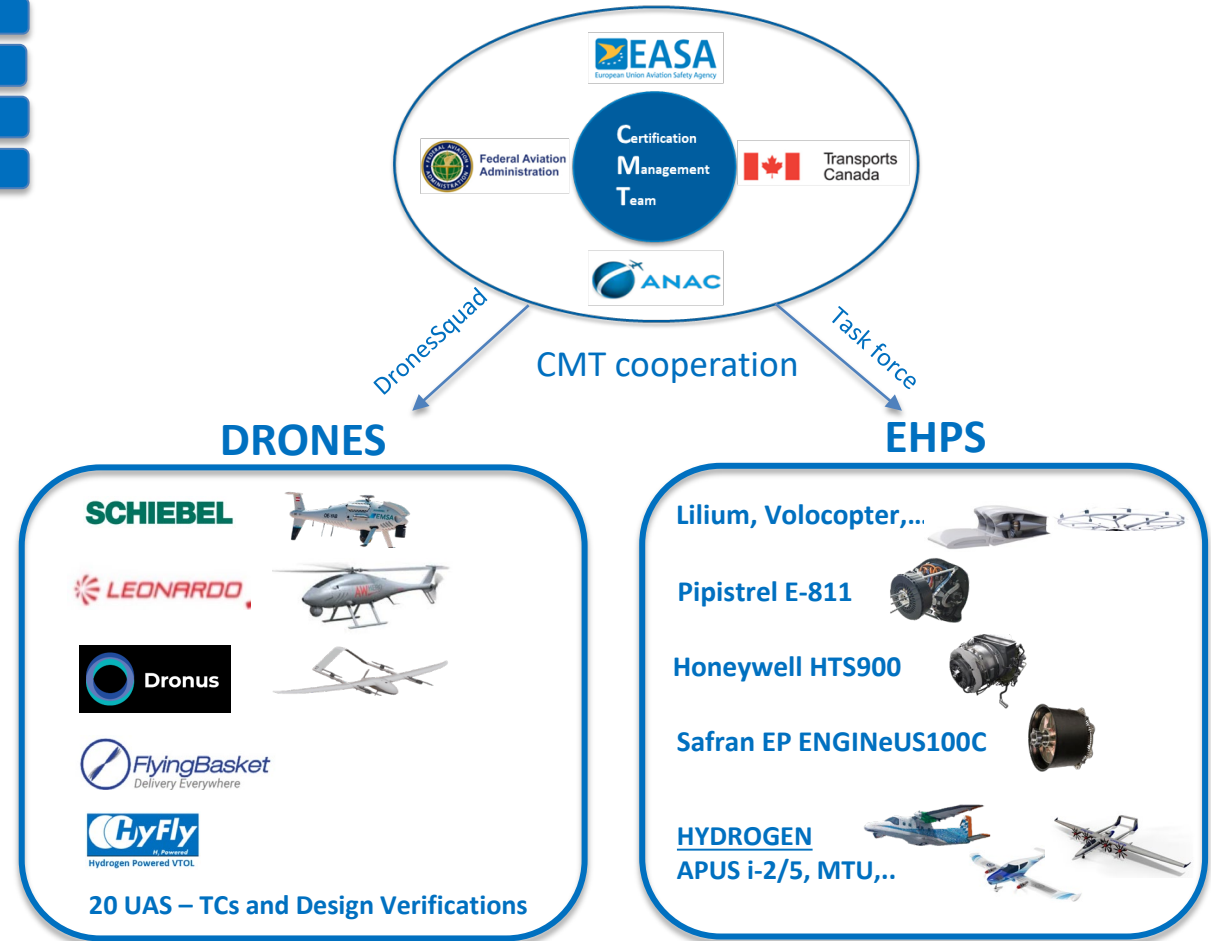
LILIUM

VOLOCOPTER

VERTICAL

AUTOFLIGHT

ASCENDANCE





Working with industry upstream of type of certification

TAC

Technical Advice Contract

Provide technical advice on specific new design feature or concept

IPC

Innovation Partnership Contracts

Encourage development of

- ✓ novel technologies
- ✓ new business models
- ✓ new services

**Artificial Intelligence
& Neural Networks
in the Cockpit**



PAP

Pre-Application Projects

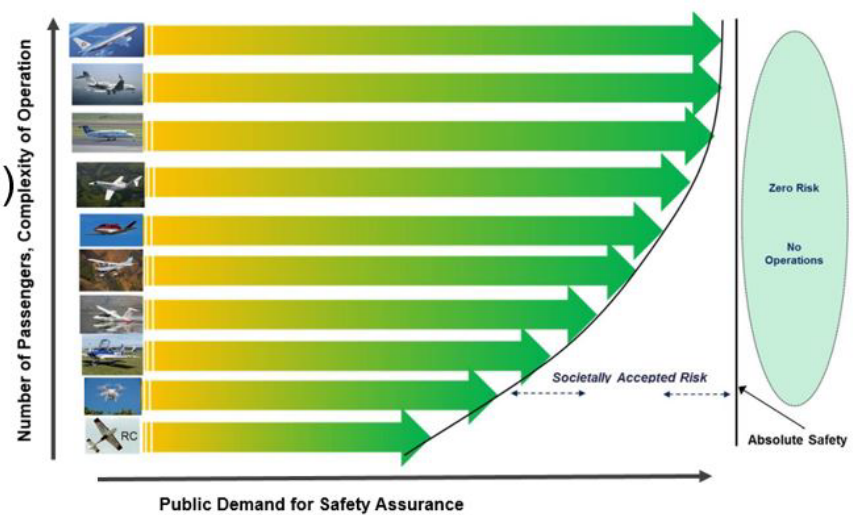
- ✓ Encourage development
- ✓ De-risk certification process
- ✓ Regulatory gap analysis
- ✓ New Special conditions
- ✓ New Means of compliance

Applicable to

- Disruptive technologies or innovative concepts
- Product with embodied innovative or disruptive technologies

• Regulatory Framework

- Derived from FAA Safety Continuum
- Special class process of 21.17(b) allows FAA to develop airworthiness standards to suit the design
- Built on performance-based requirements in 14 CFR part 23



- Additional requirements drawn from parts 25, 27, 29, 33 and 35
- Unique new requirements added where needed
- Publication in Federal Register for public engagement

Brazilian airline Azul plans \$1 billion order of eVTOL Lilium Jets

By eVTOL

Monday August 2, 2021

Avolon teams with Gol and Grupo Comporte for eVTOL ridesharing in Brazil

Lilium has announced plans for a strategic alliance with Azul, the Brazilian airline purchase 220 eVTOL Lilium jets for up to 2025.

By eVTOL

Wednesday September 22, 2021



International aircraft leasing company Avolon has announced a strategic alliance with Brazilian airline Gol and transport operator Grupo Comporte for the commercialization of an eVTOL ridesharing platform in Brazil.



2022, NEWS

EVE CONFIRMS TYPE CERTIFICATION PROCESS WITH ANAC



In a new milestone, Eve is to formalize the process of obtaining a Type Certificate for its Electric Vertical Take-Off and Landing (eVTOL) aircraft with the Civil Aviation Agency of Brazil (ANAC). This means that the company will further comply with international technical standards and mandatory airworthiness requirements.

As per the agreement with ANAC, Eve's eVTOL certification process

Brazil is part of the global eVTOL business development

eVtols orders already announced by manufacturers globally indicated that:

More than 10k orders already announced. Approx 6% firm orders, 73% non firm, 19% options and 2% are flight hours.

- Brazilian operators are responsible for 8% of the orders
- Brazilian industry is a individual OEM sum the higher number of orders

According to SMG Consulting data published in Oct 2022 , public on internet

Vision

Working together to promote innovation

- AAC - Industry: opportunities to implement new regulatory models
- AAC - AAC: compatibility of regulatory systems
- AAC - municipalities: setting out the right roles and expectations

Taking care of new entrants

- early involvement highly recommended
- open to discuss basic concepts
- open to accept application early than normal

Creating acceptable safety objectives

- convergence of standards
- autonomy and environment
- community acceptance





Panel Discussions