



ICAO

# INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY



# Advanced Air Mobility (AAM) activities at ICAO

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# What's AAM?

REGIONAL AND  
CROSS-BORDER  
CARGO AND  
PASSENGER  
TRANSPORT



PUBLIC  
GOOD and  
MEDICAL  
SERVICES



CONSUMER/  
ENTERPRISE  
GOODS AND  
SERVICES



LOCAL  
PASSENGER  
TRANSPORT



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## What's AAM? (cont'd)

*Advanced air mobility (AAM), in the ICAO context, is a developing form of aviation ultimately operating within a highly automated and collaborative environment. AAM operations will be enabled by a range of innovative technologies. These include, inter alia, automated traffic management, digital ecosystems and sustainable solutions, as well as new aircraft designs, means of communications and types of infrastructure.*

*AAM services will include transport of passengers, cargo, parcels and mail as well as other aerial services benefiting society, and will occur in urban, regional and interregional areas, as well as internationally.*

*AAM has the potential of improving intermodal transportation accessibility, sustainability and mobility, and the quality of the environment, life, safety and security of citizens*



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## Historical & background considerations at ICAO

- Pilotless aircraft → Chicago Convention
- 80 years (almost) built a safe and reliable aviation framework: international air operations
- Leveraged that expertise to develop the RPAS framework
- UAS: model regulations, humanitarian, courses...
- Drone Enable outcomes: UTM Framework
- Continuous calls by States for ICAO to increase involvement in UAS global frameworks

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## Historical & background considerations at ICAO (cont'd)

- 41<sup>st</sup> Assembly of ICAO (2022): Mandate from States for ICAO to work on AAM and perform a gap analysis
- ICAO's Air Navigation Commission acted on the Assembly's request by authorizing a study group
- AAM Study Group (AAM SG) established by the ICAO Secretary General end-2022

Nowcast

Vertiport

5G/6G comms capabilities

# What will have to be tackled?

Microweather

Autonomy

Interfaces

New Flight rules

Autonomy

Role of the human

Conflict management

Role of the pilot

New operations

Skills and training

Electric propulsion

Information and Data Management

DAA

Multi-level of governance

Traffic management

V2V

Certification

Facilitation

Legal framework

Airworthiness

New infrastructure

Interaction

Cyber

Social acceptance

Self-separation

New services

Security

Economic model

Infrastructure

Interoperability

New source of energy

Key enablers



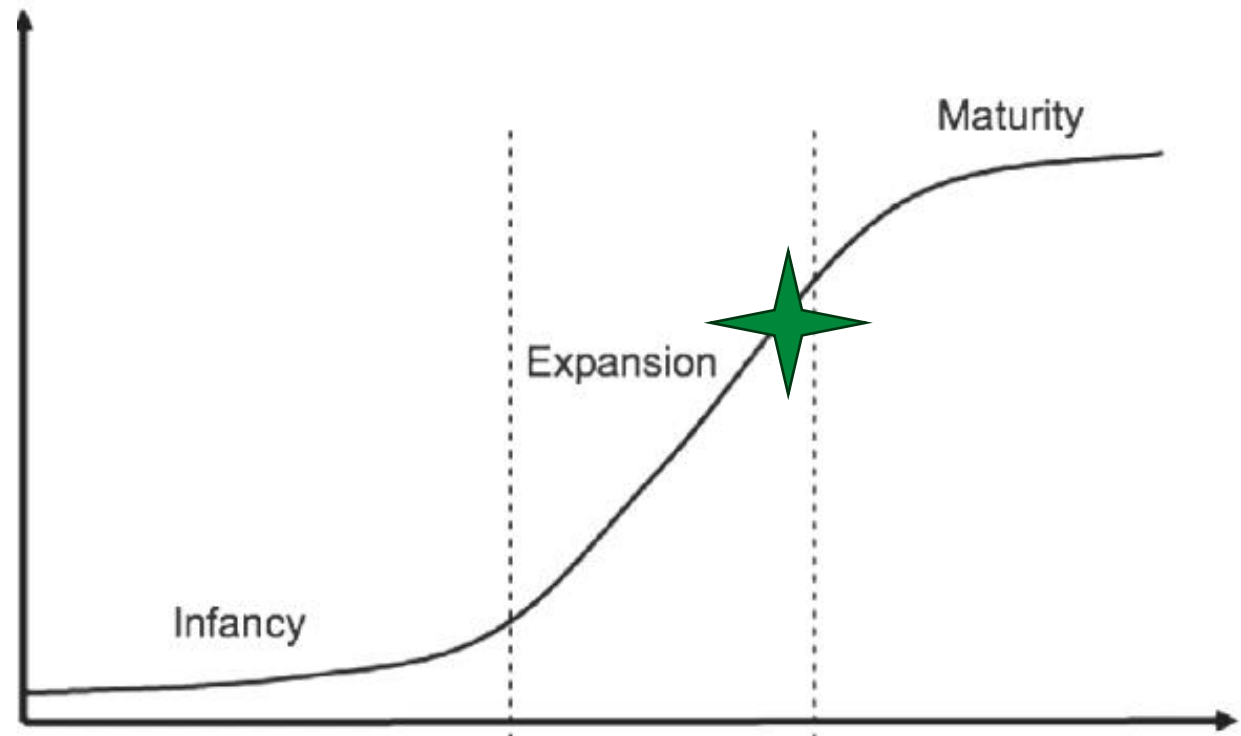
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## Are we starting from scratch?

- Chicago Convention and its Annexes
- ICAO Expertise and established mechanisms
  
- Need to innovate
- International aviation framework
  
- New thinking but not a revolution

## How is this different from ICAO's usual work?

- A new ecosystem with new paradigms
- High connectivity
- Digital born
- Leveraging technological advances
- New capabilities coming with new requirements
- New needs
- ICAO's engagement moment



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## Why ICAO?

- Critical foundation for international operations
  - ICAO to lift potential roadblocks and regulatory showstoppers and identify the bottlenecks
- Foster global harmonization (regulatory concept and framework) and interoperability
- New regulatory approaches
- Build an understanding of the landscape of the future aviation ecosystem
- Be the coordinating forum between stakeholders (States, SDOs and industry)

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## Why ICAO? (cont'd)

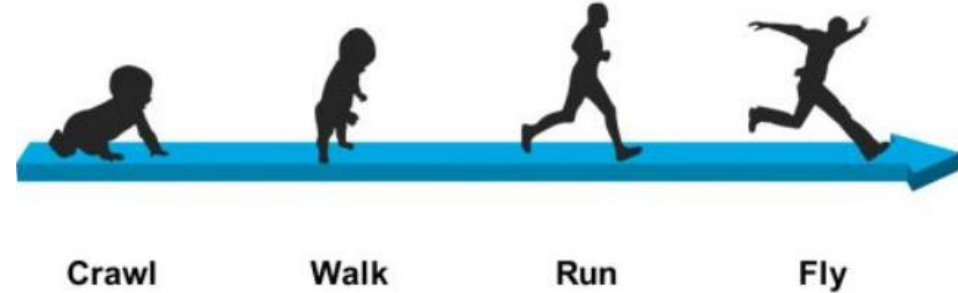
- Foster strategic convergence of the AAM ecosystem and the conventional aviation ecosystem
- Industry & interoperability
- No Country Left Behind



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# Overall Phases of Work

*Crawl, walk, run, fly approach*



## Phase 1 : Initial phase:

- better understand the problem (assessment)
- develop a holistic vision
- gap, recommendations for work and strategy
- initial guidance development and draft global framework

## Phase 2 : Structuring the work, if necessary:

Roadmap, ICAO Strategy, ...

## Phase 3 : Development phase, if necessary.

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## Topics being currently considered by the AAM SG

- Assessing the AAM Ecosystem (not only the aircraft)
- Holistic vision document of the AAM ecosystem evolution
- UAS regulatory framework gap analysis
- UTM implementation guidance material
- Exploring areas : autonomy and automation, the role of the pilot, information and data management, the link between AAM and the UN SDG...

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## Other on-going activities linked to AAM

- Vertiport design
- Consider the AAM needs in the Global ATM Operational Concept
- Consider AAM in the next major update of GANP

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## Conclusions

- Not alone and not everything
- Developing AAM framework is a major endeavor
- ICAO is the forum to develop a globally harmonized and interoperable framework
- Appropriate governance established, and will be adjusted it as work progresses
- ICAO leverages its experience and will work in sync with existing activities and structures
- Strategic convergence between AAM and conventional aviation ecosystems will be central to support harmonization, interoperability and safety
- Strong call from the ICAO Council to address AAM and New Entrants as a priority
- The ANC oversee the AAM work



# AAM 2024

ICAO'S FIRST ADVANCED  
AIR MOBILITY SYMPOSIUM

9 — 12 September 2024  
ICAO Headquarters, Montréal, Canada







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**#ICAO #DRONEENABLE2023 #UTM #UAS #AAM**



Thank You!