



October 7, 2024

ICAO LTAG Stocktaking on CO2 Emissions Reductions

Perspectives on Advanced Air Mobility



BUREAU
VERITAS

WHAT IS ADVANCED AIR MOBILITY



Diagram illustrating AAM and highlighting the four stages of maturity for integrated AAM operations. (Photo: NASA)

TECHNOLOGICAL ADVANCEMENTS

AAM brings about advancements in aircraft designs, automated air traffic management, digital ecosystems, communications.

Specifically, advancements in electric propulsion in eVTOLs, combined with airspace management optimization present the potential for reduced emissions.

But overall environmental impact depends on various factors.



Lifecycle emissions
(manufacturing,
maintenance, batteries)



Electricity source
for recharging



Emissions from ground
infrastructure
development and usage
(e.g. vertiports)



REGULATORY CHALLENGES

And potential environmental benefits

AAM brings about advancements in aircraft designs, automated air traffic management, digital ecosystems, communications.



Regulations for AAM are still in development, primarily focused on safety, airspace management, and certification standards



Sustainability is not yet a central part of most regulatory frameworks



Need to incorporate sustainability into regulations and establish standardized metrics for emissions, noise, and lifecycle assessments



Source: ICAO Ambular Project



LEVERAGING DATA AND ICT TO DRIVE SUSTAINABLE REGULATIONS

A collaborative, multi-stakeholder approach is essential for the sustainable development of AAM

STANDARDIZATION GAPS

The absence of standardized measurement metrics hinders effective assessment of AAM's environmental impact.

NEED FOR DATA COLLECTION

Need to collect data on emissions, noise, and lifecycle assessments to inform regulations for AAM

ICT, by enabling data sharing, monitoring, and regulatory compliance, can help assess the real impact of AAM

The data collected and standardized through ICT frameworks can appropriately inform the development of comprehensive AAM regulations

BUREAU VERITAS' COLLABORATIVE APPROACH

BV Group is well positioned equipped to support responsible integration of AAM through our Net Zero Center of Excellence, our expertise in environmental impact and lifecycle assessments, industrial facility energy and supply chain audits, eco-design and eligibility diagnostics, compliance with certification standards among others.



CONCLUSION



AAM holds immense potential, but its true environmental impact depends on numerous factors



Success of AAM's sustainability relies on consistent monitoring, strong governance, and the development of standardized measurement frameworks



Bureau Veritas' commitment to supporting the industry with environmental assessment, certification, and sustainability



Fostering collaboration to build an AAM ecosystem aligned with global environmental goals



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