



Unmanned Aviation 2022

DRONE ENABLE Symposium - *Learning from the Past for a Better Future*

14 - 16 November 2022

DAY 1 – Monday, 14 November 2022

09:30 – 09:40	<p>Welcome Remarks</p> <p>Mr. Salvatore Sciacchitano, <i>Council President, ICAO</i></p>
09:40 – 10:00	<p>Keynote</p> <p>Honorable Kwaku Ofori Asiamah, <i>Minister of Transport, Ghana</i></p>
10:00 – 10:30	<p>What's New at ICAO Regarding UTM/UAS?</p> <p><i>This update will summarize the work of ICAO, including the most recent updates to the UTM Framework (Edition 4) based on the information derived from DRONE ENABLE 2021, updates to the ICAO UAS Toolkit and the results of the DRONE ENABLE 2022 RFI Process.</i></p> <p>Mr. Mark Wuennenberg, <i>Technical Officer, Remotely Piloted Aircraft Systems Section, ICAO</i></p>
10:30 – 11:00	<p>Coffee Break</p>
11:00 – 12:15	<p>Supporting ATM/UTM Integration</p> <p><i>This session will look into the coordination between, and coexistence of, ATM and UTM services. Topics to be discussed, and considering the operational realities, include: what are ANSPs facing/experiencing with their interactions with UTM service providers (USPs); what efforts are underway to integrate the UTM ecosystem with ATM; what is working or, conversely, not working; which key enablers are missing that would help accelerate ATM/UTM integration, such as new flight rules.</i></p> <p>Moderator: Mr. Michael Gadd, <i>Head of Office of Airworthiness, Blue Bear Systems Research Ltd.</i></p> <p>Presentations:</p> <p>Mr. Frank Matus, <i>Director, ATC and Digital Aviation Segment, Americas, Thales</i> Mr. Andreas Udovic, <i>Project Manager, Deutsche Flugsicherung (DFS), Germany</i> Mr. Jan-Eric Putze, <i>Chief Executive Officer, Droneiq, Germany</i> Mr. Alan Chapman, <i>Director, RPAS Traffic Management, NAV CANADA</i> Mr. Will Whitelaw, <i>Senior RPAS Specialist, Civil Aviation Safety Authority, Australia</i></p>
12:15 – 12:30	<p>Name, Title, TBD, Gold Sponsor</p>
12:30 – 14:00	<p>Lunch – Sponsored by TBD</p>



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14:00 – 15:15	<p>Facilitation of UAS Operations</p> <p><i>International cargo and mail delivery using UAS are soon expected to become routine operations. Many global air cargo carriers are currently testing the use of unmanned aircraft for the delivery of packages. UA being aircraft, the provisions pertaining to documents to be carried on board aircraft engaged in international navigation, including lists of cargo manifests, are applicable. Additionally, requirements such as customs clearances, etc., will need to be addressed. However, in the case of UAS operations, there is no flight crew to physically carry or hand over such documents or conduct customs clearances. This session will discuss whether the existing provisions of Annex 9 — Facilitation, pertaining to the requirement and use of documents as well as entry and departure requirements, can and should apply to UAS operations?</i></p> <p>Moderator: Name, Title</p> <p>Presentations: Mr. Vincent Desiderio, Safety and Operations Expert, Universal Postal Union Mr. Glen Lynch, Chief Executive Officer, Volatus Aerospace, Canada Dr. Johanna Jordaan, Chief, Aviation Medicine Section, ICAO Name, Title</p>
15:15 – 15:45	Coffee Break
15:45 – 17:00	<p>Environmental Impacts – Noise and Life Cycle Emissions</p> <p><i>At a time when environment considerations are more important than ever, the environmental impact of UAS and AAM should be closely examined. Such a discussion should not only focus on the operations of the aircraft, but also the environmental impacts of the entire ecosystem. This session will address several topics including noise, emissions related to the entire life cycle of the aircraft and its components, and how these systems may reduce environmental impacts of traditional aircraft/vehicles. The session will also cover the work currently being undertaken by ICAO’s Committee on Aviation Environmental Protection in these areas.</i></p> <p>Moderator: Mr. Neil Dickson, Chief, Environmental Standards Section, ICAO</p> <p>Presentations: Mr. Max Fenkell, Policy and Government Affairs Lead, Joby Aviation, United States Ms. Monica Alcabin, Technical Fellow, Global Regulatory Strategies, Boeing Ms. Ruby Sayyed, Head, ATM Strategy, International Air Transport Association (IATA) Name, Title</p>
17:00-17:15	Name, Title TBD, Platinum Sponsor
Reception – Sponsored by TBD	
End of Day 1	



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DAY 2 – Tuesday, 15 November 2022

09:00 – 09:05	Welcome
09:05 – 09:25	Keynote Mr. Andreas Boschen , <i>Executive Director, SESAR 3 Joint Undertaking</i>
09:25 – 10:25	RFI Topic 1 – Panel 1 <i>Experiences and Best Practices from the Deployment/Implementation of UTM Systems or Services</i> <i>As UTM systems and services continue to mature and act as enablers for unmanned aircraft operations, including beyond visual line-of-sight (BVLOS) activities, it is important to direct attention towards successful UTM deployments and implementations in order to determine what worked and what could have been improved. This session will include the experiences gained, lessons learned and best practices developed by those that have led the way in UTM deployments.</i> Moderator: Mr. Benoit Curdy , <i>Head of Strategy and Innovation, Swiss Federal Office of Civil Aviation (FOCA)</i> Presentations: Mr. Libby M. Bahat , <i>Head, Aerial Infrastructure Department, Civil Aviation Authority, Israel</i> Ms. Marina Estal Muñoz , <i>Head of Airspace Policy Area, Directorate General of Civil Aviation, Spain</i> and Mr. Daniel García-Monteavaro Vizcaíno , <i>Head of Drone Business Development Department ENAIRE, Spain</i> Mr. Santiago Llucià , <i>UAS and New Technologies Expert, Federal Office of Civil Aviation (FOCA), Switzerland</i> Dr. Hrishikesh Ballal , <i>Co-founder and Lead Developer, Openskies</i>
10:25 – 10:55	Coffee Break
10:55 – 11:55	RFI Topic 1 – Panel 2 <i>Experiences and Best Practices from the Deployment/Implementation of UTM Systems or Services</i> <i>As UTM systems and services continue to mature and act as enablers for unmanned aircraft operations, including beyond visual line-of-sight (BVLOS) activities, it is important to direct attention towards successful UTM deployments and implementations in order to determine what worked and what could have been improved. This session will include the experiences gained, lessons learned and best practices developed by those that have led the way in UTM deployments.</i> Moderator: Mr. Benoit Curdy , <i>Head of Strategy and Innovation, Swiss Federal Office of Civil Aviation (FOCA)</i> Presentations: Mr. Eyal Zor , <i>Co-Founder and Chief Executive Officer, Airwayz</i> Mr. Laurent Huenaearts , <i>Vice President and General Manager, Americas, Unifly</i>



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	<p>Mr. Chris Kucera, <i>Head of Strategic Partnerships, OneSky</i> Ms. Cecilia Claramunt Puchol, <i>Senior Research Technician, Polytechnic University of Valencia (UPV), Spain</i></p>
11:55 – 12:25	RFI Topic 1 – Question and Answer Session
12:25 – 12:40	Name, Title, TBD, Gold Sponsor
12:40 – 14:00	Lunch – Sponsored by TBD
14:00 – 15:15	<p>ICAO Developed Materials to Support Safe UAS Operations</p> <p><i>This session will provide an overview of the UAS Model Regulations and the UAS for Humanitarian Aid and Emergency Response (U-AID) materials developed by ICAO. The model regulations allow States to regulate UAS operations that remain outside of the IFR international arena. The complementary U-AID provides additional guidance specifically developed for humanitarian aid emergency response operations. ICAO has also developed several courses to assist States with the implementation of these provisions.</i></p> <p>Moderator: Mr. Frederic Malaud, <i>Technical Officer, Remotely Piloted Aircraft System Section, ICAO</i></p> <p>Presentations: Ms. JC Shine, <i>Aviation Safety Inspector (Operations), Federal Aviation Administration, United States</i> Ms. Tracy Lamb, <i>Chief Executive Officer, Quantum AI, United States</i> Ms. Anne Grimal, <i>Technical Officer, Remotely Piloted Aircraft Systems Section, ICAO</i></p>
15:15 – 15:45	Coffee Break
15:45 – 17:00	<p>UAS for Humanitarian Operations – Joint ICAO, UNICEF and WFP Panel</p> <p><i>UAS have proven to be effective tools due to their diverse capabilities: ease of operations, quick deployment in dangerous situations, adapted functions such as imaging sensors, and relatively low cost. While the relevance of UAS no longer needs to be proven, the implementation of such operations remains challenging. These challenges may include whether local regulations and/or local capacity exist to conduct such operations. This joint session with United Nations Children’s Fund (UNICEF) - Office of Innovation and the World Food Programme (WFP) will showcase the use of UAS to support a variety of humanitarian activities, and how ICAO supports government and industry stakeholders to be best prepared for these operations.</i></p> <p>Moderator: Mr. Cliff Sweatte, <i>Senior Policy Advisor, Akin Gump Strauss Hauer and Feld LLP</i></p> <p>Presentations: Mr. Michael Scheibenreif, <i>Innovation Specialist, Eastern and Southern African Regional Office, UNICEF</i> Ms. Anne Grimal, <i>Technical Officer, Remotely Piloted Aircraft Systems Section, ICAO</i></p>



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Mr. Oleg Aleksandrov, *Head RPAS - Airship Unit, Aviation Service, World Food Programme, United Nations*

Ms. Elizabeth Bourke, *Project Manager UAS Team – IT Division, World Food Programme, United Nations*

End of Day 2

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DAY 3 – Wednesday, 16 November 2022

09:00 – 09:05	Welcome
09:05 – 10:05	<p>RFI Topic 2 – Panel 1 <i>UTM Data Requirements</i></p> <p><i>In order for UTM to support multiple safe UAS operations within and beyond visual line-of-sight, data related to weather, 3D structures, other aircraft, etc., must be available. The session will address the type of data needed to support safe operations, how that data is collected, maintained current, shared with operators, and whether standards for certain types of data are needed in terms of data quality (accuracy, resolution, integrity, traceability, timeliness, completeness and format), adequacy, availability, reliability, continuity, security and resilience.</i></p> <p>Moderator: Mr. Jean-François Grout, Assistant Director ICAO Relations, International Air Transport Association (IATA)</p> <p>Presentations: Mr. Lucas Florêncio Queiróz de Oliveira, Co-Founder, AL Drones Mr. Libby M. Bahat, Head, Aerial Infrastructure Department, Civil Aviation Authority, Israel Ms. Mary Ellen Miller, Principal Analyst, Mosiac UTM Dr. Kin Huat Low, Principal Investigator of UTM-UAS Programme, Air Traffic Management Research Institute (ATMRI); Nanyang Technological University, Singapore</p>
10:05 – 10:35	Coffee Break
10:35 – 11:35	<p>RFI Topic 2 – Panel 2 <i>UTM Data Requirements</i></p> <p><i>In order for UTM to support multiple safe UAS operations within and beyond visual line-of-sight, data related to weather, 3D structures, other aircraft, etc., must be available. The session will address the type of data needed to support safe operations, how that data is collected, maintained current, shared with operators, and whether standards for certain types of data are needed in terms of data quality (accuracy, resolution, integrity, traceability, timeliness, completeness and format), adequacy, availability, reliability, continuity, security and resilience.</i></p> <p>Moderator: Mr. Jean-François Grout, Assistant Director ICAO Relations, International Air Transport Association (IATA)</p> <p>Presentations: Mr. Michael Hoodspith, Vice President, International Business Development, OneSky Mr. Don Berchoff, Chief Executive Officer, Tru Weather Solutions Dr. Daisuke Kubo, Associate Senior Researcher, Japan Aerospace Exploration Agency, Japan Dr. Joseph Rios, Chief Technologist, Aviation Systems Division, NASA Ames Research Center</p>



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11:35 – 12:00	RFI Topic 2 – Question and Answer Session
12:00 – 12:15	<i>Sponsor Presentation</i>
12:15 – 13:30	<i>Lunch</i>
13:30 – 14:45	<p>The Digital Road to UTM Implementation</p> <p><i>Whether from existing sources, such as AIS, or other (evolving) sources, digital data is a key foundation of UTM. Regardless of source, the essential functions of the UTM system drive the data requirements. A means is necessary to identify the data requirements and specific characteristics of each, parse data sources and identify data gaps, and repurpose or develop new provisions for the data. This panel will discuss potential options on how to most effectively develop this space.</i></p> <p>Moderator: Mr. John Scull Walker, Senior Partner, The Padina Group</p> <p>Presentations: Mr. Koen De Vos, Secretary General, Global UTM Association Mr. Amit Ganjoo, Chief Executive Officer, ANRA Technologies Mr. Stephane Dubet, International Coordination and Programs, Direction Services De Navigation Aérienne (DSNA), France Mr. Andrew Lacher, Chief Technologist for Future Airspace Operations, NASA Langley Research Center</p>
14:45 – 15:15	<i>Coffee Break</i>
15:15 – 16:45	<p>Advanced Air Mobility – Initial Concept of Operations</p> <p><i>As the development and deployment of advanced air mobility (AAM) aircraft continue to mature, it is important to clearly understand the intended CONOPS for these operations. This will assist in ensuring all the required enabling activities have been completed to support the safe implementation of these capabilities. Clearly understanding this CONOPS will assist States and industry when considering how to address the many facets of the AAM ecosystem, to include, for example: operational requirements, crew training and licensing, infrastructure needs, etc. Experts in the AAM field will provide their views on the outlook for the near- and medium-term AAM CONOPS.</i></p> <p>Moderator: Parimal Kopardekar, PhD, NASA Senior Technologist for Air Transportation System, NASA Ames Research Center</p> <p>Presentations: Mr. Rob Eagles, System Development and Deployment Strategy Airbus UTM, Airbus-SV Mr. Makoto Eguchi, Deputy Director JCAB, Ministry of Land, Infrastructure, Transport and Tourism, Japan Mr. Antoine Martin, Advanced ATM Officer, Civil Aviation Safety Directorate, France Mr. Matthew Satterley, Policy and Government Relations, Wing Dr. Eduardo García González, Manager European ATM Coordination and Safety, CANSO</p> <p>Mr. Ken Goodrich, Deputy Project Manager for Technology, Advanced Air Mobility Project, NASA</p> <p>Mr. Steve Bradford, Chief Scientist, Federal Aviation Administration, United States</p>



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16:45 – 17:00

Symposium Close-Out

Mr. Stephen P. Creamer, Director, Air Navigation Bureau, ICAO

End of Day 3

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