



| ICAO

UNMANNED AVIATION 2022

RPAS 2022

SYMPOSIUM — 7 — 9 NOVEMBER 2022

ICAO HEADQUARTERS, MONTRÉAL, CANADA

EVENT DIRECTORY



UNMANNED AVIATION 2022



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PARTICIPANT GUIDE

REGISTRATION & ACCESS

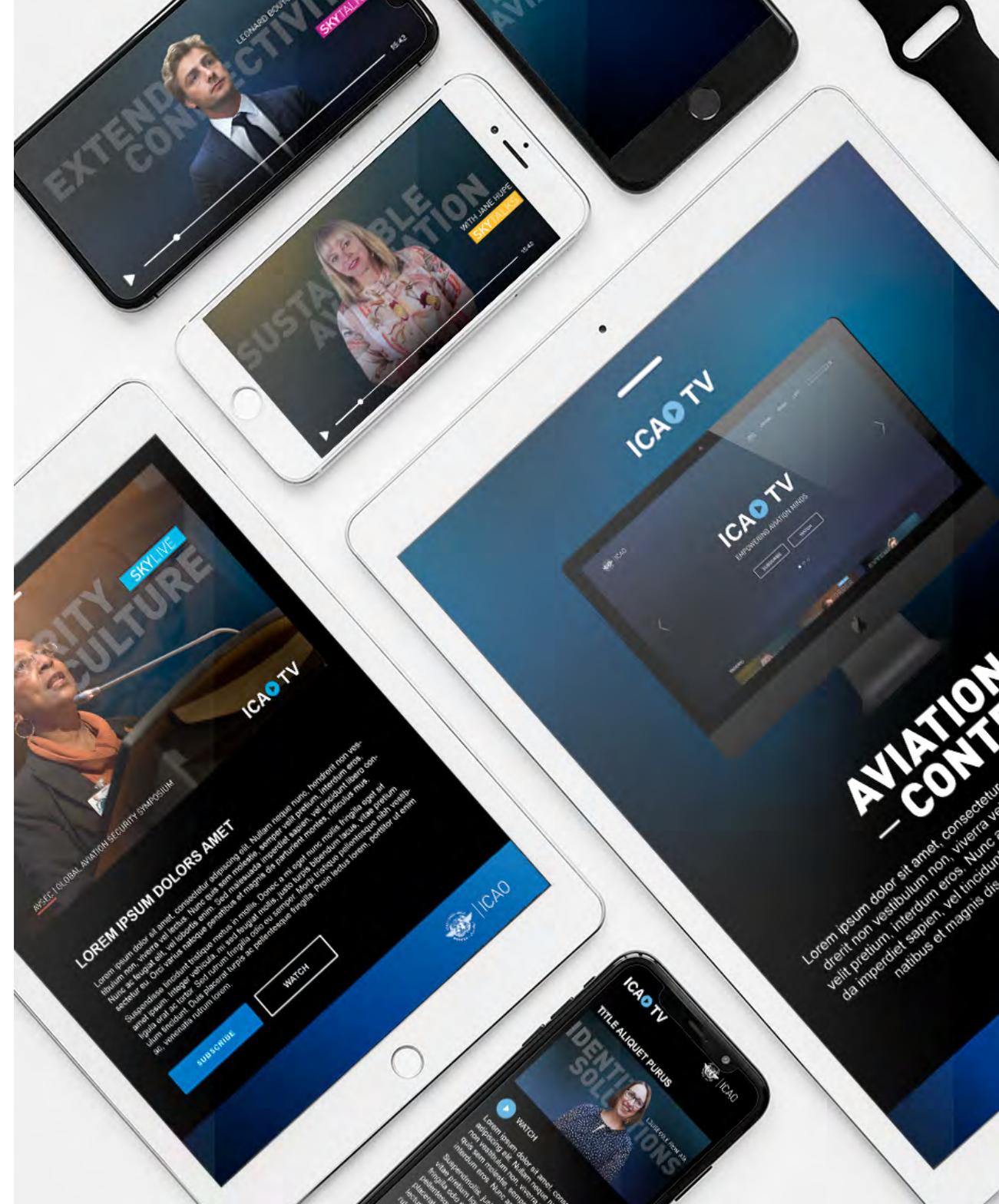
01. Registration is required for the **RPAS 2022** event.
02. Click [here](#) to register online. Should you have any issue registering, please contact registration@icao.int.
03. This event can host a limited number of participants; therefore, registration is on a **first-come, first-served basis**.

ICAO TV

After the event, you can rewatch your favorite sessions and panels from anywhere and on any device from ICAO TV.



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02



SPEAKERS PROFILES



Click here to view the full speakers list and bios

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03



AGENDA

DAY 1

MONDAY, NOVEMBER 7

- 09:30 – 09:40 **WELCOME REMARKS**
Mr. Juan Carlos Salazar, Secretary General, ICAO
- 09:40 – 10:00 **KEYNOTE - TO CERTIFY OR NOT TO CERTIFY**
Mr. Philippe Martou, Director Aviation Services, World Food Programme, United Nations
- 10:00 – 10:30 **ICAO UPDATES AND ACTIVITIES RELATED TO AIRWORTHINESS/RPAS/ETC.**
Mr. Usmaan Javed, Technical Officer, Remotely Piloted Aircraft Systems Section, ICAO

10:30– 11:00 COFFEE BREAK

- 11:00 – 12:00 **ARE YOU READY TO OPERATE RPAS INTERNATIONALLY? ANNEX 6, PART IV DEVELOPMENTS**
As States' are challenged with how to successfully incorporate RPAS into their existing air traffic management system, this session will discuss the framework and rules for international operation of RPAS. Attendees will come away with a better understating of the proposed Annex 6, Part IV which deals specifically with international RPAS operations. They will also hear how RPAS are being operated around the world, and what improvements can be made to facilitate the transition from exceptions requiring special handling to routine operations.

Additionally, in order to facilitate future implementation efforts, this session will explore several RPAS unique requirements, such that States and industry will gain a better understanding of the rationale behind the new provisions.

Moderator:

Mr. Mark Wuennenberg, Technical Officer, Remotely Piloted Aircraft Systems Section, ICAO – UAS Advisory Group (UAS-AG) Secretary

Presentations:

- **Mr. Ron van de Leijgraaf**, Directorate-General for Mobility and Transport Ministry of Infrastructure and Water Management, the Netherlands
- **Mr. Andrew Ward**, RPAS Policy and Regulation Specialist, Civil Aviation Safety Authority, Australia
- **Mr. Lance King**, Senior Policy Advisor Airworthiness and Airspace Integration, Northrop Grumman Corporation

12:00 – 12:15 **SPONSOR PRESENTATION BY SUPERNAL**

12:15 – 13:45 **LUNCH BREAK SPONSORED BY SUPERNAL**



13:45 – 15:15 **CRITICAL SYSTEMS FOR RPAS OPERATIONS: UPDATES ON C2 LINK AND DETECT AND AVOID (ANNEX 10)**

Communications and separation capabilities are essential for routine airspace access. Speakers in this session will provide an overview of C2 Link and detect and avoid (DAA) as well as their role in supporting safe and secure RPAS operations. This will be a two-part session with experts in the fields of both C2 Link and DAA providing details on the existing and proposed Standards for Annex 10.

Moderator:

Mr. Ron van de Leigraaf, Directorate-General for Mobility and Transport Ministry of Infrastructure and Water Management, Netherlands

Presentations:

- **Mr. Brandon Suarez**, Vice President, UAS Integration, Reliable Robotics
- **Mr. Ben Ivers**, Director of Global Safety and Regulatory Affairs, Autonomous Systems, Boeing
- **Mr. Don Nellis**, Electronics Engineer, Spectrum Planning and International, Federal Aviation Administration (FAA), United States
- **Ms. Jennifer Richter**, Attorney-at-law, Partner at Akin Gump, Strauss Hauer & Feld

15:15 – 15:45 **COFFEE BREAK**

15:45 – 17:00

CERTIFYING RPAS AND THEIR COMPONENTS (REMOTELY PILOTED AIRCRAFT, REMOTE PILOT STATION, C2 LINK)

Aircraft certification is critical for access into the conventional aviation system. This session will look at the approach to certification contained in Annex 8 with a focus on how to address the key components of the RPAS system, namely the remotely piloted aircraft, remote pilot station, and C2 Link. Airworthiness experts from States and industry will discuss the major components of an RPAS system, and how they intend to certify them.

Moderator:

Mr. Doug Davis, Head of Airworthiness, Northrop Grumman Corporation, United States

Presentations:

- **Mr. Ailton Jose de Oliveira Junior**, Civil Aviation Regulation Specialist, National Civil Aviation Agency (ANAC), Brazil
- **Ms. Lernik Khani**, Aerospace Engineer, Federal Aviation Administration, United States
- **Mr. Ami Weisz**, Manager, Research and Development and Flight Testing, Civil Aviation Authority Israel
- **Mr. Andy Thurling**, Principal, Thurling Aero Consulting

DAY 2

TUESDAY, NOVEMBER 8

09:00 – 09:05 **WELCOME REMARKS**

09:05 – 09:20 **KEYNOTE**

Mr. Marc Allen, Chief Strategy Officer, Boeing

09:20 – 10:20 **WHY CERTIFY, FOR WHAT PURPOSE, AND TO WHAT STANDARDS?**

This session discusses the underlying purpose and principles regarding certification and how they translate into State certification processes. Annex 8 provisions are designed to fit aircraft into the existing system. However, new aircraft conducting new types of operations in new pieces of airspace, will require new certification solutions. This session will touch on levels of certification needed to provide appropriate airspace access.

Moderator:

Ms. Ruby Sayyed, Head, ATM Advocacy, International Air Transport Association (IATA)

Presentations:

- **Mr. Lobang Thabantso**, Manager, Airworthiness Engineering, Airworthiness Department, Civil Aviation Authority, South Africa
- **Ms. Kirsten Riensema**, Advanced Air Mobility Challenge Lead, Innovation Futures Hub, Civil Aviation Authority, United Kingdom
- **Mr. Ailton Jose de Oliveira Junior**, Civil Aviation Regulation Specialist, National Civil Aviation Agency (ANAC), Brazil
- **Capt. Miguel Marin**, Chief, Operational Safety Section, ICAO

10:15– 10:45 COFFEE BREAK

10:45 – 12:00 **FIT-FOR-PURPOSE AIRWORTHINESS CERTIFICATION FOR (SMALLER) NON-IFR RPAS**

International aircraft operations require the carriage of a certificate of airworthiness. The current Annex 8 Standards are for those RPA intended to operate predominantly in accordance with instrument flight rules. However, this approach may not adequately address the majority of beyond visual line-of-sight operations conducted internationally. This session will address the issues that need to be resolved for cross-border operations with fit-for-purpose certification requirements in the near-term and how these can be evolved into a global solution.

Moderator:

Mr. William Voss, Principal Advisor, Voss Aero

Presentations:

- **Mr. Bruno Boucher**, Senior Vice-President Advisory, Nordic Unmanned
- **Ms. Melissa Rusanganwa**, Manager of International Affairs, Civil Aviation Authority (RCAA), Rwanda
- **Mr. Charlton Evans**, Chief Executive Officer, End State Solutions
- **Mr. Roberto J. S. Honorato**, Head of Airworthiness Department Civil Aviation Authority (ANAC), Brazil

12:00 – 12:15 **SPONSOR PRESENTATION BY RELIABLE ROBOTICS**



12:15 – 13:45 **LUNCH SPONSORED BY RELIABLE ROBOTICS**

13:45 – 15:15 **CERTIFICATION OF “FLYING TAXIS” IN THE ADVANCED AIR MOBILITY CONTEXT - WHERE ARE WE?**
Several aircraft manufacturers are progressing through the regulatory certification processes for passenger-carrying advanced air mobility (AAM) aircraft – with or without a pilot on board. This panel of world leaders in the field of AAM will discuss the various certification processes being pursued.

Moderator:

Ms. Kirsten Riensema, Advanced Air Mobility Challenge Lead, Innovation Futures Hub, Civil Aviation Authority, United Kingdom

Presentations:

- **Mr. James Harris**, Head of Test and Evaluation, Supernal
- **Mr. Yutao Jiang**, Vice President of EHang UAM
- **Ms. Caryn Moore Lund**, Head of US Launch Markets, Lillium
- **Mr. Brian Klinka**, Head of Aircraft Certification, Beta Technologies
- **Mr. Nobuo Kishi**, CTO, Skydrive

15:15 – 15:45 **COFFEE BREAK SPONSORED BY SUPERNAL**



15:45 – 17:00

AUTOMATION TO AUTONOMY; WHAT IS THE PATH TO CERTIFICATION?

As remotely piloted operations become increasingly automated, what level of automation will States and regulators be comfortable with? As aircraft systems evolve from human-centric to automation-centric decision-making, the certification of automation becomes necessary. What measures must be put in place to ensure the safe operation of a highly automated or autonomous aircraft? The panellists will address the safety, security and efficiency concerns regarding the certification of automation.

Moderator:

Mr. Michael Gadd, Head of Office of Airworthiness, Blue Bear Systems Research Ltd.

Presentations:

- **Mr. Craig Bloch-Hansen**, Project Manager, RPAS Technical Standards, Remotely Piloted Aircraft System Task Force, Transport Canada
- **Dr. Zena Assaad**, Senior Research Fellow at the Australian National University, Trusted Autonomous Systems Ethics Uplift Fellow
- **Dr. George Romanski**, Chief Scientific and Technical Advisor for Aircraft Computer Software, Federal Aviation Administration (FAA), United States
- **Mr. Johann C. Dauer**, Head of Department Unmanned Aircraft Institute of Flight Systems, German Aerospace Center (DLR), Germany

DAY 3

WEDNESDAY, NOVEMBER 9

09:00 – 09:15 **WELCOME REMARKS**

09:15 – 10:15 **LESSONS LEARNED FROM THE RPAS PANEL**

The ICAO RPAS Panel was established to develop SARPs necessary to safely integrate RPA into international IFR operations. The RPASP working groups, staffed by experts from around the world, have been successful at creating numerous provisions that have been, or are in the process of being, adopted by ICAO. As the RPASP draws closer to completion of the first phase of work, this panel of experts takes a look back in order to discuss what lies ahead. What worked and what lessons have been learned to shape the next phase of work?

Moderator:

Ms. Leslie Cary, Chief, Remotely Piloted Aircraft Systems Section, ICAO

Presentation:

- **Mr. Michael Boyd**, Technical Officer, Airspace Management and Optimization Section, ICAO
- **Mr. Zia Meer**, PEL Inspector, Flight Operations Department, Civil Aviation Authority, South Africa
- **Mr. Randy Willis**, Senior Policy Advisor, Northrop Grumman
- **Mr. Ron van de Leijgraaf**, Directorate-General for Mobility and Transport Ministry of Infrastructure and Water Management, Netherlands
- **Mr. Frédéric Malaud**, Technical Officer, Remotely Piloted Aircraft Systems Section, ICAO



10:45 – 12:00 **VERTIPTS – WHERE ARE WE?**

What is a vertiport and how does it differ from a traditional airport/heliport? This session will look at the current vertiport concepts and environments. Challenges surrounding airspace limitations, infrastructure requirements and governance, as well as intermodal access will be discussed in order to provide States with a better understanding of how these issues can be addressed. A part of the discussion will focus on the economics of vertiports and how they will be funded - crucial to technical development as well as urban planning.

Moderator:

Mr. Davis Hackenberg, AAM Mission Manager, NASA

Presentations:

- **Mr. Arturo Madrigal Ybarro**, Airports Project Manager, SENASA, Spain
- **Mr. Andrew Giacini**, Regulatory Lead for the Americas, Skyport
- **Mr. Thomas Romig**, Vice President Safety, Security and Operations, Airports Council International
- **Mr. Jeffrey Wharff**, Senior Economics Advisor, Rapporteur of the ICAO AEP-ANSEP working group on cost recovery of UAS, Federal Aviation Administration, United States
- **Mr. Jacques Coulon**, AICP Mobility Innovation Manager, City of Orlando, United States

12:00 – 13:45 **LUNCH BREAK**

13:45 – 15:00 **RPAS-RELATED STANDARDS DEVELOPMENT ACTIVITIES**

This session will provide an overview of the RPAS-related technical standards, whether under development or already published, by other standards developing organizations (SDOs). How will these standards apply to certification efforts, and how can they be utilized by CAAs/States and industry? SDOs will share their completed and ongoing efforts as well as their insights and methodologies in developing RPAS-related material.

Moderator:

Mr. Mervyn Fernando, Technical Advisor to the Permanent Mission of Singapore, ICAO

Presentations:

- **Mr. Alain Vallée**, Technical Programme Manager, EUROCAE
- **Ms. Judith Richie**, Director, Government and Industry Affairs – Aerospace, SAE International
- **Mr. Philip Kenul**, Senior Vice President, Aviation and Operations, TriVector Services
- **Mr. John Scull Walker**, Senior Partner, The Padina Group
- **Ms. Katie Edwards**, Secretary for RTCA Special Committee, SC-228, Boeing

15:30 – 16:30

CONTRIBUTIONS OF THE AVIATION RESEARCH COMMUNITY TO ICAO'S WORK

This session will discuss how the research community is supporting ICAO's work. The International Forum for Aviation Research (IFAR) will present its Urban Air Mobility Scientific Assessment, containing an independent assessment of upcoming innovations by the aviation research community. The information contained in the IFAR assessment will inform ICAO's decision-making process related to the introduction of innovations into the aviation regulatory framework.

Moderator:

Mr. Christian Eschmann, Strategic Coordinator Autonomous Air Mobility, German Aerospace Center (DLR), Germany

Presentations:

- **Mr. Charles Vidal**, Program Leader, Integrated Aerial Mobility, National Research Council, Canada
- **Dr. Adriana Andreeva-Mori**, Associate Senior Researcher, Japan Aerospace Exploration Agency, Japan
- **Dr. Kyle Ellis**, System-Wide Safety Project, Deputy Project Manager, NASA
- **Mr. Derek Gowanlock**, Technical Lead, Flight Autonomy; Integrated Aerial Mobility Research Program, National Research Council, Canada

16:30 – 17:00

SYMPOSIUM CLOSE-OUT

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

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Contact: John Illson, Chief Safety Officer

Email: john.illson@supernal.aero

Supernal (Su.per.nal) is a US-based smart mobility service provider on a mission to redefine how people move, connect and live. We are developing an Advanced Air Mobility eVTOL vehicle and working to responsibly co-create the supporting ecosystem and integrate it into existing transit options. As part of Hyundai Motor Group, we are both a new business and an established company, with plans to harness our automotive manufacturing heritage to make Advanced Air Mobility and accessible to the masses.



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RELIABLE ROBOTICS

<https://reliable.co>

Contact: Brandon Suarez, VP of Uncrewed Aircraft Systems (UAS) Integration

Email: bsuarez@reliable.co

Reliable Robotics launched in 2017 to bring certified autonomous vehicles to commercial aviation as soon as possible. The company's automation system enables remote operation of any aircraft type and will expand access to more locations. Reliable's vision is to transform the way we move goods and people around the planet with safer, more convenient and more affordable air transportation. The company is headquartered in Mountain View, CA and has a distributed global workforce.

UPCOMING EVENT

14 - 16 NOVEMBER 2022

DRONE ENABLE 2022

The symposium will bring together key stakeholders and will focus on the complex issues presented by unmanned aircraft system traffic management (UTM) which need to be addressed collectively in order to integrate UAS into the global aviation system. The symposium will be an opportunity for networking, collaboration and coordination between civil aviation authorities, industry and both new and existing stakeholders as we move forward in this dynamic field. It also provides a unique opportunity to progress a comprehensive and harmonized regulatory framework to support UAS activities.

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