



From Vision to Impact: HAPS Alliance in Action

Progress, Innovation, and Leadership in the Stratosphere

*Milestones and Achievements Driving the Advancement of
HAPS Technology*

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The HAPS Alliance continues to make important strides in accelerating the global adoption of HAPS technology. Through strategic publications, regulatory engagement, thought leadership, and international collaboration, the Alliance is actively shaping the future of stratospheric operations.

Every milestone, whether it's a white paper, regulatory engagement, or global presentation, demonstrates our commitment to enabling safe, effective, and scalable HAPS deployments. Collectively, these efforts are laying the groundwork for a more connected, sustainable, and innovative future in the stratosphere.

Some of the resources below are available exclusively to members. To learn more about membership opportunities, contact us at membership@hapsalliance.org.

Publications Driving Progress

- [Driving the Potential of the Stratosphere](#): Explores the untapped opportunities HAPS technology offers across diverse applications.
- [Bridging the Digital Divide with Aviation in the Stratosphere](#): Demonstrated 62,500 ft LTE direct-to-handset link and 20-hour mission endurance.
- **HAPS Terminology White Paper**: Approved and utilized in discussions across the industry, such as the ICAO RPAS Panel and the NASA Multi-Aircraft ("m: N") and RTCA m: N Working Groups.  **Member-Only Resource**
- [HAPS Operation Using Attended Autonomous Fleet Systems White Paper](#) & [HAPS Certification Pathways White Paper](#): Content was leveraged in the JARUS HAPS "High Altitude Operations" annex to the certification standard for UAS (CS-UAS).
- [Guidelines for Payload Operation in the Stratosphere](#): First end-to-end environmental and EMC guidelines for HAPS payload builders.
- [Acceptable Levels of Risks for HAPS White Paper](#): Discusses acceptable levels of risk for HAPS and proposes a framework for operator self-management.

- [Creating an Enabling Regulatory Environment for HAPS Deployment](#): Used by regulators on five continents in national consultations.
- **Airspace Demand Analysis in the HAPS Market ("Ops Tempo") Paper**: Written and shared with a select group of Regulators and ANSPs.  **Member-Only Resource**
- [HAPS Reference Architecture Series: Cell Towers in the Sky](#): Introduces non-experts to HAPS reference architecture.
- [HAPS Reference Architecture Series: HAPS Advantages in an Era of Satellite Connectivity](#): Outlines HAPS use cases and highlights various advantages.
- [Cooperative, Seamless, and Global Digital Skies for Higher Airspace White Paper](#): Discusses a vision for a globally harmonized, cross-border, and integrated Higher Airspace Operations Traffic Management system.
- **Internal Guidebook on the Implementation of the Radio Regulations for the Use of High-Altitude Platform Stations (HAPS) as IMT Base Stations (HIBS)**  **Member-Only Resource**
- **COMING SOON: White Paper on the Guidelines for Defensive Payloads in the Stratosphere**
- **COMING SOON: White Paper on Defense Applications Working Group Modeling and Simulation Data**: Aims to generate DoD collaboration on stratospheric representative modeling and simulation data for defense purposes.

Global Presence & Thought Leadership

- HAPS Alliance Aviation Working Group (AWG) Chair, Andy Thurling, and HAPS Alliance Member, Leonard Bouygues, spoke on Higher Airspace Operations at [Airspace World 2025](#) in Lisbon.
- HAPS Alliance President, Russ Van Der Werff, spoke at the Stratospheric Operations and Research Symposium (UND SoaRS 2025) in St. Paul, Minnesota, in April 2025.

- [HAPS Alliance ETM/HAO](#): A summary of this paper was published in the inaugural issue of "Global Airspace Management" magazine, which launched at [Airspace World 2025](#).
- HAPS Technology was featured in the promotional video that showcased the [CANSO CATS CONOPS](#) at [Airspace World 2025](#).
- HAPS Alliance AWG Chair Andy Thurling presented "Higher Altitude Operations & Suborbital Flights" at an [IAASS Webinar](#).
- NASA and HAPS Alliance AWG members are active in ongoing ETM development. The Alliance participated in a successful NASA ETM Collaborative Environment (CE-1) Simulation test in the summer of 2024, and more Alliance members are signing up with NASA for the next iteration of simulation test campaigns in "CE-1.5" in the summer of 2025.
- HAPS Alliance will be represented on the NASA High Altitude panel at the [AIAA Aviation Forum](#) in Las Vegas this July.

Regulatory & Agency Engagement

- The Alliance continues to contribute to ICAO Interim Guidance on Higher Airspace Coordination.
- The Alliance is participating in the EASA Study on Higher Airspace Regulations.
- Two Alliance members are working with JARUS Review on Safety Certification for High-Altitude Airframes.
- The ICAO 14th ANC identified HAPS and HAO as areas where ICAO must become involved, and the Technical Staff is creating a HAO Study Group in the new year.
 - This HAPS "Guidance Material" will be crucial to "jumpstarting" this group. We will provide ICAO a draft set of HAPS Guidance Material and participate with early-adopter States in the ICAO-led HAO "Working Group"/" Task Force"
- **COMING SOON:** Alliance Members are forming a Task Force to establish a regulatory framework, or "governance," for HAPS Alliance members when sharing airspace and resources.

- This work is parallel to what has been done in the [US UTM Implementation](#) in the Dallas-Fort Worth area, involving multiple Industry stakeholders.
- **COMING SOON:** Alliance members are developing Interim HAPS "Guidance Material" for ICAO to reference and provide to early-adopter States.
- **COMING SOON:** The Alliance is working with JARUS to incorporate HAPS topics in the SORA V3.0 work, as well as participating with the Working Group, Airworthiness, on CS-HAPS V2.0 and LTA GMC.
- **COMING SOON:** The Alliance is participating in the FAA Vendor Demo Day this Fall to brief the new administration.
- The Alliance participated in the NASA/FAA "Class E Cooperative Airspace Management" kickoff and follow-up F2F meeting.

Notable Events

- **Annual HAPS Alliance Member Meetings:** The Alliance holds yearly meetings to gather members and work towards the Alliance's goals, featuring member presentations, working group meetings, and networking opportunities.
- **Mobile World Congress Barcelona ([2023](#) and [2024](#)):** The Alliance has presented twice at MWC Barcelona on the potential of HAPS technology for society.

Organizational Developments

- **Formation of the Advisory Board:** In October 2024, the HAPS Alliance established an Advisory Board to provide strategic guidance and direction to the organization. Greg Ewert, a longstanding contributor to the industry, was appointed as the first member.