

THE CONTROLLER

APRIL 2025

JOURNAL OF AIR TRAFFIC CONTROL



64TH IFATCA ANNUAL CONFERENCE

ALSO IN THIS ISSUE:

- TRAINING OF AIR TRAFFIC CONTROLLERS
- BEST PRACTICES AND STRATEGIES FOR A STRONG SAFETY CULTURE
- GENDER EQUALITY AND EMPOWERING WOMEN IN AVIATION
- THE IFATCA WELLBEING REPOSITORY



AMERICAS
TBD

EUROPE
BOLOGNA, ITALY
14-16 OCT 2025

AFRICA & MIDDLE EAST
VICTORIA FALLS,
ZIMBABWE
3-5 NOV 2025

ASIA/PACIFIC
MACAU, S.A.R.
20-22 OCT 2025

IFATCA 2025 REGIONAL MEETINGS



Top of the cover shows the iconic control tower of Zayed International Airport in Abu Dhabi, United Arab Emirates. UAE is this year's host of the IFATCA Annual Conference.

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FROM THE EXECUTIVE BOARD

➤ BY HELENA SJÖSTRÖM FALK, IFATCA PRESIDENT & CEO



Training and Recruitment – Our Flight Plan for the Future

This year's annual conference in Abu Dhabi is pivotal for our industry. "Training and Recruitment – Our Flight Plan for the Future" is more than just a theme; it is a call to action. As we face global staff shortages and increasing operational demands, the need to attract, train, and retain the next generation of air traffic controllers has never been more urgent. Ensuring that we recruit from a broad and diverse talent pool is essential to maintaining the resilience and safety of our airspace.

At the same time, controllers in some parts of the world are under greater pressure than ever. They face operational challenges, political instability, and external threats. Their dedication and professionalism deserve our full support.

With AI becoming an integral part of air traffic management, this conference provides a crucial opportunity to

discuss how technology can enhance our industry without compromising the human element. The future of air traffic control depends on finding the right balance—leveraging innovation while safeguarding the expertise, judgment, and adaptability that make air traffic controllers irreplaceable.

Abu Dhabi is the perfect setting for these discussions, bringing together industry, experts, and professionals from around the world to shape the future of air traffic control. A special thank you to the Emirates Aviation Association for hosting this important event. Their commitment to progress and excellence ensures that this conference will be a platform for meaningful dialogue, collaboration, and shared solutions.

The strength of our Federation lies in the unwavering commitment and camaraderie of our members, who work tirelessly to uphold our shared

mission. Over the past year, our dedicated volunteers have given their time, energy, and expertise to drive our initiatives forward, and we extend our deepest gratitude for their invaluable contributions. As we gather for this conference, we will enjoy presentations of numerous working papers that reflect the depth of our collective efforts and the innovative ideas shaping our industry.

We also extend our sincere appreciation to our Industry Partners for their steadfast cooperation and support, which are crucial to our continued success. Together, we are building a stronger, more resilient IFATCA. I would like to wish all participants a productive and inspiring conference!

helena.sjostrom@ifatca.org



To enhance air traffic safety, to promote the air traffic control profession, and to shape the future of air traffic management.

VISION STATEMENT

IFATCA is the global voice of Air Traffic Controllers. It furthers air traffic safety, influence the sustainable evolution of aviation, and embraces all members of its community. The apolitical federation provides guidance, representation, training, and other services to advance the status and professionalism of air traffic control. It collaborates with other international organizations to achieve mutual goals.

FROM THE EDITORIAL TEAM

➤ **BY NICOLA NI RIADA, IFATCA COMMUNICATIONS COORDINATOR**



Welcome to the first Controller Magazine of 2025.

We decided to publish an issue of the Controller magazine to coincide with our Annual Conference, which, along with our regional meetings, is definitely one of the highlights of the IFATCA calendar.

This edition allows us to showcase our hosts, Emirates Aviation Association, and explore some of the topics that will be discussed in Abu Dhabi. In line with the theme of 'Recruitment and Training, our flight plan for the future' and the agenda, the magazine has articles from ICAO, CANSO, and EUROCONTROL, among others, which we hope will make you think (or challenge your thinking!) about training and recruitment.

Both panels this year; *"Transforming Airspace for Sustainable Aviation"* and *"Innovation in ATC recruitment and*

training" should start some interesting discussions, see a little more about both inside! The workshops have expanded to include a Comms Team initiative on Outreach, raising the profile of Air Traffic Control in your home country, and a Mental Well-Being workshop as well as IFATCA101 again, after it has proven so popular over the last 2 years.

And, of course, we will read about all of the Standing Committees and the Working Papers presented this year in Committees A, B, and C (more on that in our Social Media posts and at IFATCA101!)

There are articles from the Mental Wellbeing Task Force and the Equity, Diversity, and Inclusion Task Force that keep you updated on the important work of the federation committees and

task forces. It can be easy to forget that all our volunteers work year-round on behalf of the federation. Showcasing them in the magazine allows their hard work to be recognized and appreciated. While discussing the importance of staying connected with the federation's work... Are you receiving the monthly circular? Are you sharing it with your members? And are you following us on social media like Instagram, Facebook, and LinkedIn? If not, why not?

On behalf of the editorial and communications teams, I hope you enjoy this special conference issue of The Controller. We look forward to your feedback.

Le meas,

nicola.niriada@ifatca.org

IFATCA

Dont forget to follow the IFATCA Facebook and Instagram accounts.

Brought to you by the amazing IFATCA Comms Team.

MONTHLY UPDATES ON IFATCA ACTIVITIES? SUBSCRIBE TO THE

IFATCA CIRCULAR

WELCOME TO IFATCA 2025

A LANDMARK EVENT IN THE UNITED ARAB EMIRATES

➤ BY HESHAM ALTENEJI, SENIOR MANAGER ANS TRAINING



The International Federation of Air Traffic Controllers' Associations (IFATCA) is a global, non-profit, and non-political organization representing over 50,000 air traffic controllers across more than 130 countries. Established in 1961, IFATCA's mission is to promote the highest standards of safety, efficiency, and regularity in international air navigation. The federation advocates for the professional interests of air traffic controllers, provides guidance and training, and collaborates with international aviation authorities to influence the sustainable evolution of aviation.

In a significant development, the United Arab Emirates (UAE) will host the 64th IFATCA Annual Conference from April 28 to May 2, 2025, in Abu Dhabi. This prestigious event is organized in partnership with the Integrated Transport Centre (Abu Dhabi Mobility), the Emirates Aviation Association, and with support from the General Civil Aviation Authority (GCAA) and the Department of Culture and Tourism – Abu Dhabi (DCT).

Notably, IFATCA 2025 marks the long-awaited return of this global conference to the Middle East, as the event was last hosted in the region in 2011 in Jordan. Bringing it back to the UAE after more than a decade highlights the region's growing prominence in the global aviation sector and its commitment to advancing air traffic management.

What makes IFATCA 2025 truly exceptional is its scale—this upcoming edition is expected to welcome more than 1,000 attendees, more than doubling the participation of previous cycles, which typically saw around 400 delegates. This remarkable growth reflects the increasing global engagement in air traffic management

and underscores the UAE's capability to host large-scale, high-impact international aviation events.

The conference will convene international organizations, government authorities, and leading civil aviation companies to discuss advancements in air traffic control (ATC). Key topics include improving safety, efficiency, and consistency in global air navigation, as well as developing ATC systems, procedures, and infrastructure. The event aims to foster knowledge sharing and enhance professional competence among air traffic controllers.

Hosting the IFATCA Annual Conference underscores the UAE's commitment to global aviation excellence and aligns with its vision of fostering innovation, seamless connectivity, and international collaboration. Abu Dhabi, as a rapidly growing aviation hub, offers a strategic location for professionals to discuss pressing industry issues and explore the latest advancements in air traffic management technology.

The conference will feature specialized panel discussions, workshops, and presentations by leading international aviation experts. Attendees will have the opportunity to engage in dialogue about challenges facing the aviation sector and effective strategies to address them, ensuring the highest levels of safety and operational efficiency.

By hosting this landmark event, Abu Dhabi reaffirms its commitment to organizing international forums, enhancing its position as a hub for global aviation and navigation, and showcasing its sustainable growth across various sectors.

For more information about the conference, including registration details and the event schedule, please visit the official IFATCA 2025 conference website:

<https://www.ifatca2025.com>

Emirates Aviation Association

Founded in 1997, the Emirates Aviation Association (EAA) is a pioneering organization at the heart of the UAE's thriving aviation industry. Over the decades, EAA has established itself as a trusted partner for aviation professionals, government entities, and educational institutions.

Our diverse membership comprises seasoned experts, aspiring aviation enthusiasts, and students who share a passion for advancing aviation standards. EAA is dedicated to promoting a culture of safety, innovation, and excellence, ensuring the UAE remains a global leader in the aviation sector.

Through partnerships with stakeholders across the public and private sectors, EAA plays an integral role in shaping the future of aviation, providing opportunities for growth, collaboration, and professional development.



WELCOME TO ABU DHABI

➤ **BY AHMAD ABBA, IFATCA EXECUTIVE VICE PRESIDENT
AFRICA & MIDDLE EAST**



Welcome to the 64th IFATCA Conference –Recruitment And Training, Our Flight Plan For The Future!

It is a genuine honour to welcome you to the 64th Annual Conference of the International Federation of Air Traffic Controllers' Associations, taking place in the vibrant, ambitious, and forward-thinking city of Abu Dhabi—a city that truly reflects the spirit of our profession: collaboration, service, and a constant pursuit of excellence.

A heartfelt thank you to our gracious hosts—the General Civil Aviation Authority of the United Arab Emirates and the Emirates Aviation Association—for their outstanding hospitality and commitment. Their efforts exemplify the spirit of collaboration that drives our global community.

This conference serves not merely as a tradition but as a vital platform for us to come together as professionals and individuals, to share ideas, strengthen partnerships, and shape the future of air traffic management. In these gatherings, we are reminded

of the values that unite us: safety, integrity, innovation, and service.

As we navigate our path forward, we encounter both exciting opportunities and evolving challenges—rapid technological change, increasing traffic complexity, and the ongoing necessity for global harmonisation. These are shared challenges, and only together can we genuinely rise to meet them.

The Africa and Middle East region takes immense pride in providing this platform—not only to engage in technical dialogue and policy discussions but also to connect,

collaborate, and build enduring bonds across cultures and continents. This is your opportunity to be heard, contribute, and grow.

Once again, welcome to Abu Dhabi. May this conference be fruitful, enlightening, and inspiring—for each of you, and our shared future in aviation.

Warm regards,

ahmad.abba@ifatca.org



THE IFATCA 2025 ORG



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ORGANISING COMMITTEE



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SAFIYA KALLINGAL



SALEM ALALI



FAISAL ALMANSOORI

CONTROLLER TRAINING AND ASSESSMENT



A CHALLENGE, A NECESSITY, A PASSION, AND A VIRTUE, ALL TOGETHER!

➤ BY JEAN-FRANÇOIS LEPAGE, IFATCA DEPUTY PRESIDENT

For as long as I have been an air traffic controller – which is more than twenty years – I have always been fascinated by the process by which we train and assess future air traffic controllers (and existing ones). As a matter of fact, my first appointment for IFATCA was on the Next Generation of Aviation Professionals (NGAP) Programme, which was, in 2014, tasked with the almost impossible mission of drafting ICAO provisions and guidance material for competency-based training and assessment (CBTA) of air traffic controllers.

For those who are not familiar with what NGAP is, the initiative was established to ensure a sufficient supply of qualified and competent professionals to operate, manage, and maintain the future international air transport system. It is not news to any of us that our aviation industry is facing multiple challenges: a large portion of the workforce is approaching retirement, some others are transitioning to other industries for several reasons (aviation is not as sexy as it used to be), and we are now, more than ever, competing with other sectors to attract and keep the best talent.

In this spirit, the NGAP Programme was launched to attract, educate and retain aviation professionals. I was mainly involved in the “educate” portion of that mandate, and one of the early findings of NGAP was that air traffic control (ATC), despite being one of the most rigorous and demanding jobs in the world, was suffering from a severe lack of harmonized competencies and qualifications. What do I mean by that? Yes, competencies required by air traffic controllers around the globe are essentially the same everywhere, but the conditions in which we operate, as well as the performance standards we must reach, are widely different. Furthermore, ICAO did not offer or recommend, until the work of the CBTA Taskforce was completed, any preferred methodology to train and assess air traffic controllers.

You will certainly have noticed the theme of this year’s IFATCA Conference, “Recruitment and Training – The Flight Plan for our Future”. It is no secret that the world is cruelly lacking air traffic controllers. It is no secret that the demand in aviation globally is increasing at an unprecedented rate. According to ICAO, over the coming decades, hundreds of thousands of new pilots, air traffic controllers, maintenance professionals, and other skilled workers will need to be recruited. We cannot simply continue to do what we have been doing for years; we need to do different; we need to do better. It means changing our recruitment models, it means attracting a more diverse workforce, by being more equitable, more inclusive. It also means training better.

And by doing better, I do not only mean doing more. I actually mean doing better. We need to collectively make air traffic control sexy again. We need to increase our outreach, appeal to the newer generation who will do tomorrow the job we love so much doing today. We also need to train better, but also become better at assessing our candidates so that we get the best results possible. By analysing our training needs appropriately, by designing and developing training and assessment programmes that are aligned with the ICAO Competency Framework for air traffic controllers, by developing observable behaviours and performance criteria that are clear, integrated, valid and reliable, we are

effectively setting ourselves up for success.

In an increasingly connected world, aviation plays a key role in society. When environment and sustainability are no longer a utopia, but a necessity, we need to consider how aviation can contribute to the achievement of the United Nation Sustainable Development Goals (UNSDG). Indeed, air traffic control plays a significant role in at least 15 of these goals and is essential to the achievement of at least six of them. When we consider how air traffic control makes a direct contribution to the promotion of better, quality education, to gender equality, to decent work and economic growth, to the industry, innovation and infrastructure, to reducing inequalities, and to climate action, it is clear we have a pivotal role to play. But it is also evident that there is still much to do.

This year’s theme for the IFATCA Conference, “Recruitment and Training – The Flight Plan for our Future”, invites each and every one of us to reflect on our successes, our challenges, and how we can all play a role in drafting the flight plan for our future. The next generation of air traffic controllers need to be recruited and trained. It is up to us to embark on this adventure and seize the opportunity before us to shape what our next generation will look like.

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www.IFATCA.org/sep



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28TH APRIL - 2ND MAY 2025
ADNEC CENTRE ABU DHABI



IFATCA WORKSHOPS

INTRODUCTION TO IFATCA:

April 29th 2025 - TUESDAY
17:00 - 18:00

For first timers and not so first timers, this is your chance to ask anything about IFATCA.



Helena
Sjöström Falk
(President and CEO)



JF
Lepage
(Deputy President)

LEVERAGING OUTREACH: STRATEGIES TO RAISE ATC'S PROFILE IN YOUR COUNTRY

April 30th 2025 - WEDNESDAY
17:00 - 18:00

Discover powerful strategies to elevate ATC's visibility in your country with expert insights from the IFATCA Communications team.



Nicola
Ni Riada
(Communications
Coordinator)



Kristian
Lavin
(ESTATCA)

MEET THE MENTAL WELLBEING TASK FORCE:

May 1st 2025 - THURSDAY
17:00 - 18:00

Explore the exciting work programme and discover the exciting topics they are progressing!



Zeljko
Oreski
(Lead: Critical Incident
Stress Management)



Olubunmi
Balogun
(Lead: Peer Support
Programme Management)



Marija
Saviki
(Lead: Wellbeing
Promotion and
Destigmatization)



CONFERENCE SYMPOSIUMS

PANEL I:

Transforming Airspace for Sustainable Aviation

Moderators: Cheryl Chen, IFATCA EVP Asia Pacific Region and David Perks, IFATCA Liaison Officer to ICAO ANC.

A focused discussion on optimizing airspace to enhance civil aviation, covering civil-military coordination, evolving airline needs, and airport expansion impacts.

10:00 – 11:00 (UAE)

06:00- 07:00 (UTC)

PANEL II:

Innovation in Air traffic Controller Training & Recruitment

Moderators: Tom McRobert, IFATCA EVP Finance and Andrew Le Bovidge, IFATCA EVP Americas (elect)

A dynamic exploration of innovative approaches to air traffic controller training and recruitment, addressing future needs and evolving industry standards.

11:00 – 12:00 (UAE)

07:00 - 08:00 (UTC)

IFATCA CODE OF CONDUCT

PURPOSE

The International Federation of Air Traffic Controllers' Associations (IFATCA) wants to provide an environment free from discrimination and harassment for all its members. All participants to any IFATCA activities, events or meetings should feel safe, respected, and valued by all the other participants. IFATCA adopts the following Code of Conduct and expects its staff, its members, its leadership and any other IFATCA participants to abide by it.

DEFINITIONS

A. Discrimination: It is discrimination to make any decision or judgment based on another person's race, ethnicity, religion, colour, sex, age, national origin, sexual orientation, disability, gender identity or expression, ancestry, pregnancy, or any other characteristic protected by law.

B. Harassment: Harassment is unwelcome verbal, visual, or physical behaviour that is based on another person's race, ethnicity, religion, colour, sex, age, national origin, sexual orientation, disability, gender identity or expression, ancestry, pregnancy, or any other characteristic protected by law.

It may include actions such as the use of name dropping, gossip, negative stereotyping and jokes. It may also be threatening, intimidating or hostile acts that relate to sex, race, age, disability, or other protected categories. Harassment may include written or graphic material that puts down or shows hostility toward an individual or group based on protected characteristics. The material could be sent by traditional or electronic means, or distributed through other means on the premises of an activity, event or meeting.

C. Sexual Harassment: Sexual harassment is unwelcome sexual advances or requests for sexual favours. It can also involve other verbal, visual, or physical behaviour of a sexual nature. It can involve inappropriate behaviour by a person of either gender toward a person of the same or opposite gender.

EXPECTED BEHAVIOUR

IFATCA expects its staff, its members, its leadership and any other participants at IFATCA activities, events, or meetings to:

- Respect others and their views
- Recognize and value individual differences
- Not engage in aggressive, bullying, or intimidating behaviour
- Not engage in discriminatory or harassing behaviour

UNACCEPTABLE BEHAVIOUR

This Code of Conduct is not intended to restrict free and open debate, but rather is concerned with preventing unacceptable behaviour, as detailed below. Unacceptable behaviour includes, but is not limited to, the following:

- Discriminatory or harassing speech or actions, including cyberbullying or cyberharassment, in the IFATCA workplace or at any IFATCA meeting or event, including all related activities and communication methods.
- Harmful or offensive verbal or written comments or visual images related to race, ethnicity, religion, colour, sex, age, national origin, sexual orientation, disability, gender identity or expression, ancestry, pregnancy, or any other characteristic protected by law.
- Inappropriate use of nudity and/or sexual images in work or public spaces
- Bullying or stalking
- Harassing photography or recording
- Uninvited sexual attention or contact
- Physical assault (including uninvited touching or groping)
- Real or implied threat of physical harm
- Knowingly making a false report under this Code is considered a violation of this Code.

STANDARD OPERATING PROCEDURES FOR IFATCA CODE OF CONDUCT REPORTS

Prior to the start of any large IFATCA event or meeting (e.g. regional meeting, Annual Conference, etc.), attendees will be provided with a copy of the IFATCA Code of Conduct. IFATCA expects all attendees to read, understand and fully comply with the IFATCA Code of Conduct.

At every meeting there will be a dedicated IFATCA team of officials to whom you can report any potential breach of the IFATCA Code of Conduct. If you experience or witness unacceptable behaviour, please inform the designated officials, or any Executive Board member.

Once a report is received, it will be investigated and treated confidentially to the extent this is possible while properly assessing the situation. IFATCA will take all appropriate steps to ensure that the unacceptable behaviour stops, help the person who have been subjected to unacceptable behaviour and take steps to ensure retaliation does not occur.

All properly notified reports will be investigated thoroughly by two members of the dedicated IFATCA team of officials and one member of the IFATCA Executive Board. Their findings will be forwarded to the IFATCA Executive Board without delay.

IFATCA takes these complaints seriously and any individual engaged in discriminatory and/or harassing conduct will be subject to disciplinary action imposed by a majority vote of the Executive Board. Disciplinary actions may be, a verbal or written warning, a verbal or written advice over future conduct, exclusion from the current event or meeting, termination of IFATCA employment or prohibition from attending future IFATCA events.

IFATCA officials will help the complainant in any way necessary. In instances involving allegations of assault or other criminal activity, IFATCA shall advise the complainant to file a report with the appropriate local law enforcement agency but will not pressure complainant to file such report.

Reports of potential breaches of the IFATCA Code of Conduct can be submitted to

conduct@ifatca.org



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SAFETY EXCELLENCE

CRAFTING EXCELLENCE AT THE ZAYED AIR NAVIGATION CENTRE

➤ BY AHMED AL KETBI

Crafting Excellence for Air Traffic Controllers at Sheikh Zayed Air Navigation Centre (SZC)

In the realm of aviation, safety stands as an unwavering beacon guiding every action, especially within the intricate operations managed by air traffic controllers (ATCOs) at SZC. Within this context, the pursuit of excellence is defined by the establishment of clear standards, comprehensive training, and harmonious collaboration. This article delves into the dynamic concepts of training and collaborative safety efforts that collectively shape the aviation landscape at SZC, all under the overarching theme of "Safe Operations: Crafting Excellence."

Defining Excellence through Training

The journey towards safe operations begins with a fundamental principle: defining what "good" looks like. This principle sets the stage for comprehensive training programs that equip ATCOs with the skills, knowledge, attributes and situational awareness needed to navigate the complexities of their roles.

Training, in essence, is a dynamic process that evolves in response to changing circumstances. As standards are set, training adapts to ensure ATCOs consistently meet and exceed these benchmarks. The definition of "good" performance provides a reference point against which deviations are identified and addressed.

By continuously refining training methodologies based on real-world experiences, ATCOs become adept at managing high-pressure situations, ensuring smooth traffic coordination, and making split-second decisions. Training, therefore, serves as a proactive measure to prepare for the unexpected, fostering a culture of preparedness and expertise.

Weaving Safety Together

Imagine the aviation operation as a tapestry woven from the coordinated efforts of different departments: Air Traffic Control (ATC), Communications, Navigation, and Surveillance (CNS), Aeronautical Information Management (AIM), and Facility Management.

Harmony between these departments is essential for maintaining a safe aviation environment. Seamless coordination and effective communication among

these facets create a resilient safety net. ATCOs provide real-time guidance while CNS ensures accurate positioning and communication. AIM manages crucial aeronautical information, and Facility Management maintains the physical infrastructure. Together, they form a synchronized ensemble that safeguards aviation operations.

Collaboration, however, is not a static achievement but an ongoing commitment. It demands open channels for information exchange and proactive identification of potential hazards. This collaborative mindset leads to the timely development of strategies and countermeasures that collectively enhance the aviation system's overall safety.

Elevating the Vision of Safety

In the tapestry of aviation safety, "good" isn't just a term; it's a standard that continuously evolves through rigorous training and collective effort. ATCOs at SZC play a pivotal role in shaping this standard. Your dedication to mastering training protocols and your commitment to harmonious collaboration builds an environment where safety thrives.

The vision of safe operations is realized through your expertise, adaptability, and unwavering commitment to excellence. By embodying the principles discussed in this article, you actively contribute to the answer of what "good" looks like for ATCOs at SZC.

As you navigate the complexities of aviation, remember that you are the custodians of safety, the architects of preparedness, and the guardians of excellence. Through your actions, you exemplify the ideals of safe operations, forging a path towards an aviation environment that truly embodies the essence of "good." ◀



ANS TRAINING

ANSP & AGILITY: ENSURING SAFETY IN A CHANGING WORLD

➤ BY AMIN ALBLOOSHI

In the constantly evolving aviation industry, Air Navigation Service Providers (ANSPs) must prioritize agility to effectively navigate dynamic challenges, ensuring optimal safety and performance standards.

Like resilience, agility signifies the capacity to respond and adjust to changes in a flexible manner. For ANSPs, this means being able to modify their operations and organizational structures to meet new demands effectively.

Several key areas emphasize the crucial role of agility for ANSPs. It is vital to have easily accessible operational systems to handle new functions or policies swiftly. Employees must also be proactive in learning and adapting to technological advancements and updated procedures to ensure seamless operations.

Moreover, agility was crucial in enabling ANSP staff to react swiftly and efficiently during crises such as the COVID-19 pandemic, geopolitical crises, or even exceptional weather conditions. ANSPs have had to react and adapt rapidly to these events and crises. The adaptations included:

1. Remote operations: introducing agile solutions allowed crucial ANSP functions to transition to remote work setups, ensuring operational continuity.
2. Traffic Flow Management: ANSPs have had to modify traffic flow management strategies to accommodate traffic safely during crises, requiring a high level of adaptability and innovation to optimize airspace utilization.
3. Staff Safety and Wellbeing: ANSPs can prioritize the safety and wellbeing of their employees during lockdowns or extreme weather conditions. They can implement flexible work arrangements and effective communication channels to keep staff informed and engaged.

These examples illustrate how agility is indispensable during exceptional circumstances. By adapting swiftly and innovatively, ANSPs can maintain the safe and efficient functioning of airspace even in the face of an unprecedented global challenges.

Developing an agile culture within ANSP organizations necessitates a comprehensive approach. This involves



conducting regular training sessions for employees, focusing on enhancing problem-solving and critical thinking abilities. Moreover, it is crucial to cultivate a supportive work atmosphere that promotes innovation and proactivity. In such a setting, employees are empowered to propose new ideas and enhance current practices.



SAFETY CULTURE

BEST PRACTICES AND STRATEGIES FOR A STRONG SAFETY CULTURE

➤ **BY AHMED ABDALLA AL KHAJA**



The Importance of Safety Culture in Aviation

Safety culture is the foundation of the aviation industry, where even small mistakes can lead to significant consequences. For aviation personal, skill and commitment are essential to cultivate a strong culture that ensures the safety of lives, protects valuable resources, and sustains the industry's reputation. Safety culture is more than just adhering to regulations, it's about making safety an important part of every action, decision, and process in your daily operations.

The Evolution of Safety Culture in Aviation

Over the years, the aviation industry has transformed its approach to safety. What began as a reactive model, responding to incidents after they occurred, has evolved into a proactive, preventive safety framework. Technological advancements, data analytics, and international collaboration have been key drivers of this progress. Milestones like the establishment of ICAO and the adoption of Safety Management Systems (SMS) have elevated global safety standards. Lessons learned from major incidents have further shaped regulations, highlighting the need for a strong safety culture across all aviation sectors.

Air Navigation Services (ANS) are integral to maintaining safety and efficiency in global air traffic management. Establishing and sustaining a strong safety culture in ANS not only aligns with the broader goals of aviation but also ensures that airspace management remains seamless and secure.

Here are key strategies to strengthen safety culture in ANS:

1. Leadership Commitment

Leadership must integrate safety as a core organizational value, including it in all decisions and operations. Accountability should be shared across all levels, with leaders setting the example and staff maintaining high standards. Collaboration with regulatory bodies like ICAO helps align practices with global safety frameworks, reinforcing a robust safety foundation.

2. Workforce Engagement and Empowerment

Fostering an inclusive environment involves engaging ATCOs, engineers, and all staff in safety discussions to build ownership. A reporting culture without punishment encourages employees to report hazards, incidents, and near-misses without fear. Continuous training programs, focusing on safety management, human factors, and emergency preparedness, ensure employees are skilled and confident in addressing safety challenges.

3. Qualifications, Training and Competency

Employees must be properly trained and qualified to carry out their jobs, this helps to ensure that they are able to work safely and effectively. Training should be ongoing, and employees should be competent in their jobs: this means they have the knowledge, skills and abilities to carry out their jobs safely.

4. Proactive Risk Management

Conduct thorough evaluations of potential hazards, covering technical, environmental, and human factors. Develop and implement mitigation strategies using advanced analytics and automation to address risks before they escalate. Learning from incidents and near-misses ensures actionable insights are applied to prevent recurrence.

5. Transparent Communication

Frequent communication about safety performance, initiatives, and lessons learned fosters trust and awareness across the organization. Accessible and clearly articulated safety protocols ensure all stakeholders understand their roles. Establishing two-way communication channels allows employees to share concerns and innovative ideas to enhance safety practices.

6. Continuous Improvement

Use data-driven insights to identify trends and target areas for improvement. Conduct routine audits to assess

compliance, identify gaps, and bolster operational resilience. Embrace emerging technologies like AI and machine learning to refine safety practices and enhance organizational adaptability.

7. Recognition and Reward Systems

Celebrate achievements in safety, such as long periods without incidents or successful implementation of safety initiatives. Recognize and reward employees who actively contribute to safety culture and motivate others to participate. Structured reward programs incentivize proactive safety engagement across all roles.

8. Building Trust and Psychological Safety

Adopt a “just culture” approach that emphasizes learning from mistakes while distinguishing errors from negligence. Building transparency in policies and expectations fosters confidence among employees. Additionally, offering support systems, such as mental health resources, helps reduce stress, particularly for those in high-pressure roles.

9. Operational Resilience Development

Develop robust emergency preparedness plans and conduct regular drills to ensure readiness for unexpected situations. Implement scalable operational solutions to manage fluctuating air traffic volumes and complexities. Leverage integrated systems for real-time situational awareness and improved decision-making during disruptions.

10. Collaboration Across the Aviation Ecosystem

Engage with airlines, airports, and regulators to create unified and aligned safety practices. Benchmark performance and adopt best practices from leading global ANS providers. Maintain compliance with ICAO standards and other international requirements to ensure consistency and credibility in safety practices.

By embedding these principles into daily operations, organizations can cultivate a proactive and resilient safety culture that meets the dynamic demands of the aviation sector.

Conclusion

A strong safety culture is essential for resilient Air Navigation Services. By prioritizing leadership commitment, workforce empowerment, robust safety systems, and proactive risk management, safety becomes ingrained in every aspect of operations. Transparent communication, continuous improvement, and collaboration with stakeholders further strengthen this culture, ensuring alignment with global standards. With these strategies, ANS providers can build a safer, more efficient, and future-ready aviation system. ◀



ATC SIMULATOR

THE FUTURE OF AIR TRAFFIC CONTROL SIMULATION

➤ BY NASER AL SHEHHI: SENIOR OFFICER - TRAINING SYSTEMS



An essential component of aviation safety is air traffic control. It includes keeping an eye on and controlling the movement of aircraft to make sure they keep a safe distance from one another.

An innovative instrument that enables air traffic controllers to train in virtual settings aimed to mimic real-world occurrences is the fully autonomous air traffic control simulator.

Compared to traditional training methods, the complete autonomous air traffic control simulator has a number of advantages. First of all, it offers a secure setting where ATCOs may enhance their abilities without endangering people or property. Second, it enables controllers to engage in a variety of situations e.g. emergencies which are challenging to replicate in real life. Third, it gives controllers the opportunity to learn from their errors and improve their decision-making skills. Finally, the simulator can be utilized to test new methods and technologies before using them in actual settings. This lowers the possibility of mistakes and boosts overall air traffic control operating efficiency.

The complete autonomy of the air traffic control simulator can replicate complex air traffic scenarios, thanks to its cutting-edge technologies. It can instantly adjust to changing conditions using features such as voice recognition, artificial intelligence, and machine learning algorithms.

In order to help the controllers to be more situationally aware and make better decisions, the simulator also offers realistic visual and audio inputs. It can incorporate different airports, weather scenarios, and aircraft performances, making it a flexible training tool for ATCOs.

Fully autonomous air traffic control simulators provide many advantages, but they also have certain disadvantages. The simulator's maintenance and development costs pose one of the biggest problems. It requires a large investment in staff, equipment, and software.

Ensuring the simulator effectively replicates real-world settings is another issue. To do this, programmers must ensure the simulator effectively replicates real-world



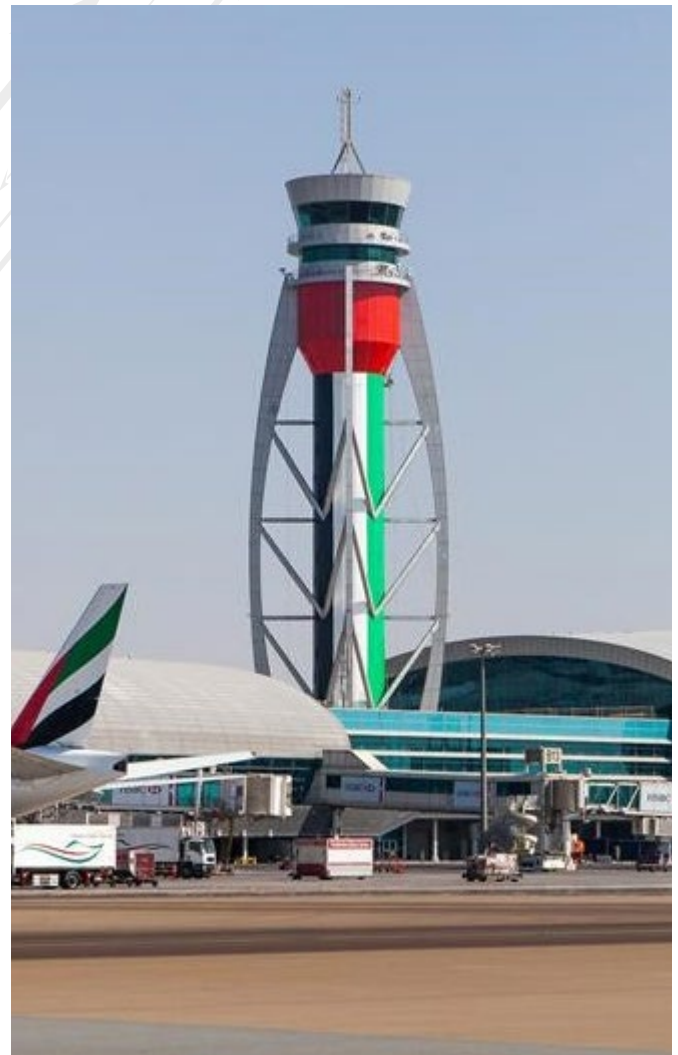
settings is another issue. To do this, programmers must constantly update the simulator to consider changes in both worlds and amendments to producers and laws. The simulator should be easy to use for all ATCOs, regardless of their level of technological proficiency.

We can anticipate seeing more advanced simulators with increased realism and interactivity as technology improves. For instance, the simulator might incorporate virtual reality (VR) technology to give controllers access to an absolutely immersive training environment.

The simulator might also be used to train pilots and other aviation specialists, giving them the knowledge, they need to collaborate with controllers and ensure safe and effective operations while also better understanding the nature of air traffic control.

For training in air traffic control, complete autonomy is a game-changer. It provides controllers with a secure, adaptable, and dynamic environment to improve their abilities and enhance their decision-making skills. The simulator is not without its difficulties, but the advantages greatly exceed the disadvantages.

In the end, the full autonomy of the air traffic control simulator marks a huge improvement in aviation safety and will be critical in guaranteeing the industry's future expansion and success. Judging from the current demands of safer & efficient training, we could see a fully autonomous system in the near future. ◀



IFATCA 2026 - ROMANIA

ROMANIA TO HOST IFATCA'S NEXT ANNUAL CONFERENCE

➤ BY CRISTIAN RADU, CHAIRMAN OF THE ORGANIZING COMMITTEE, BUCHAREST 2026

This is what we are doing my friends; we are working to make it happen. And to make it happen in a way that you will like, in a way that will make it memorable for all our colleagues around the world!

We are working hard to make the conference logo; here you can see a few attempts:

We are working hard to finalize the contract with the conference hotel,

co-organize the conference and it will assure us the funds necessary in order to make the conference a success at a reasonable price; here you have the picture taken when the Conference coordinator had a meeting with ROMATSA CEO and a part of the Organizing Committee.

We are working hard to finalize the promotional materials to be distributed during the Abu Dhabi Conference.

We are working hard to finalize the promotional movie to be presented during Abu Dhabi Conference and on the conference website.

We are working hard to welcome you next year in Bucharest!

And we are happy to do it, Cheers!



J.W. Marriott, here you can see the visit we had together with the Conference coordinator inspecting the conference hotel rooms and the facilities:

We are working hard to finalize the conference website; we want to launch it during the Abu Dhabi Conference.

We are working hard to finalize the contract between ROMATSA, the Romanian ATS Provider and RATCA that is stating that ROMATSA will



STANDING COMMITTEES

► BY OLIVIA MAY, EXECUTIVE SECRETARY GATCO



So you think you want to stand for election to a Standing Committee? There are a few things to bear in mind. First, a short checklist and below, in case you need a reminder, a summary of who the Standing Committees are and what they do:

For elected MAs, hotel, and food costs are covered by IFATCA at the working meetings, but travel expenses fall to your MA. For corresponding MAs, everything will have to be covered by the MA. Do you have the support of your MA to stand?

I am the director of my MA or have the support of the director of my MA and my MA understands that they will have to pay for my travel costs (and hotel and food if I become a corresponding member).

As an elected member of the SC, you will commit to attend the various meetings (usually 2), which are held all around the world. Therefore, it's important that you can guarantee you will be given time off and that you have no prior personal commitments on the dates for the meetings.

My ANSP will be able to give our MA representative time off to attend meetings and they have no personal commitments that clash.

There is also a personal responsibility on all members of the standing committees, both elected and corresponding, to fully commit to the work undertaken by the committee.

This means that you will be expected to be able to fully research the subject matter and prepare a Working Paper on the topic.

I confirm that I will have enough personal time to dedicate to preparing my assigned papers.

And finally, prior to joining the Standing Committee, you will be expected to have a thorough knowledge of the work they do and the roles and responsibilities required by you, the member.

I have spoken to the respective committee chair and understand the job roles and responsibilities.

If you've checked all the italicized items and are ready to continue, here's some more information on how the process works.

If you've checked all the boxes and are ready to continue, here's some more information on how the process works. A form will be available at the start of the specific Committee sessions (Committee A/B/C) at the Conference which you can complete and submit if you wish to stand for one of the committees. It will ask you to check

much the same, as the boxes you just ticked above. Once you fill that out and return it to the appropriate committee, you will be entered on the ballot.

The elections will be held in conference committees at the time specified at the start of the Committee sessions. Each MA present will be entitled to vote on the committee members and the votes will be counted by volunteers from the Committee overseen by the Chair and Co-chair.

Once the results are announced, the chair of the SC will convene all members and give them an initial brief as to the projected path for the coming year.

You can find out more about the Conference Committees and the work done at Conference in our Social Media posts (Instagram: [@ifatca1961](https://www.instagram.com/ifatca1961)) or by attending the IFATCA101 workshop at Conference, right after the Opening Ceremony.





Who exactly are the Standing Committees and what do they do?

IFATCA's Standing Committees are how the running of the Federation and its work is done in between conferences and EB meetings. There are 4 Standing Committees: Finance (**FIC**), Constitutional and Administration (**CAC**), Technical and Operational (**TOC**), and Professional and Legal (**PLC**).

The FIC is the financial heart of the Federation. They deal with everything money, budgets, and auditing. They present their work to and are elected to Committee A at the Annual Conference.

The current chairman of the FIC is Daniel Nartey (Ghana) and the committee consists of 4 MAs (currently USA, Dominican Republic, Trinidad & Tobago and United Kingdom [corresponding member]).

They can be reached via fic.chair@ifatca.org

The CAC deals with everything Constitution and Admin. Proposals may come from MAs, the EB, or the Standing Committee itself. Like FIC, they present their work to and are elected in Committee A.

The Committee is currently chaired by Rob Mason (Australia) and consists of 4 MAs (currently Ghana, Canada, Uganda, and Trinidad and Tobago [corresponding member]).

They can be reached via cac.chair@ifatca.org

TOC falls under the jurisdiction of the EVP Technical, presents their work to and is elected in Committee B. It consists of between 8 and 12 elected MAs and up to 8 technical representatives, appointed jointly by the EVPT and TOC Chair. The Committee is tasked with the continuous review of present technical and operational policy and also addresses new concerns raised from the delegation before the conference, submitted via "job cards".

They also maintain an effective liaison with international pilot associations and other international organisations and aviation groups, preparing reports on the problems affecting such organisations that are relevant to the air traffic system throughout the world.

The TOC is currently chaired by Jaymi Steinberg (NATCA USA) and there are 9 MAs (currently Canada, EGATS, Germany, Ghana, Hong Kong, Italy, Philippines, Singapore, USA).

The committee can be contacted via toc.chair@ifatca.org

PLC falls under the jurisdiction of EVP Professional, presents their work to and is elected in Committee C. They study matters related to the human and environmental factors of our jobs. They also make recommendations on



selection, recruitment and training of air traffic controllers, study matters concerning the legal liability of air traffic controllers and provide MAs and the EB with advice on legal issues when so requested.

They also maintain liaisons with the professional and legal committees of international pilot associations and other international organisations and aviation groups.

The current chair is Adam Exley (GATCO UK) and there are 12 MAs (currently Australia, Belgium, Greece, Hong Kong, Italy, Japan, Jamaica, Netherlands, Romania, Singapore, Slovenia and South Africa plus United States [corresponding member] and Israel [expert adviser]).

They can be contacted via plc@ifatca.org



ATCO SHORTAGE: THE PERFECT STORM

AIR TRAFFIC CONTROL IS DRIFTING INTO A SYSTEMIC CRISIS

➤ BY MARC BAUMGARTNER, IFATCA SESAR / EASA COORDINATOR



The Oxford English Dictionary has published references going back to 1718 for “perfect storm”. Wikipedia describes a perfect storm as a meteorological event aggravated by a rare combination of circumstances.

Current numbers of Air Traffic Controllers around the globe have the potential of a perfect storm from a staffing point of view. IFATCA has created a heat map (IFATCA 2023) with a subjective assessment of the shortage of Air Traffic Controllers and has alerted (Deleau 2023) the European institutions that a staffing crisis is looming on the horizon.

In Europe, en-route air traffic flow management delays in 2024 reached their highest level in decades, averaging 2.13 minutes per flight. The delays were driven by a limited number of capacity-constrained Area Control Centres and an increase in weather-related disruptions—a trend that could

worsen in 2025. (Performance Review Report 2024 PRR2024).

In the USA, according to the NAS Safety Review Team report (National Airspace System Safety Team Review, November 2023) a significant number of ATCOs are currently missing in the FAA Air Traffic Organisation. The need to hire more ATCOs is illustrated in this report.

Can the shortage of ATCOs be managed efficiently?

Demographics in the current workforce and an increase in traffic contribute to really challenging situation both in Europe and the USA. Other factors, like working contracts or retirement age

add an additional layer of complication to the equation. Several mitigations to the current situation are explored.

➔ Cross border operations

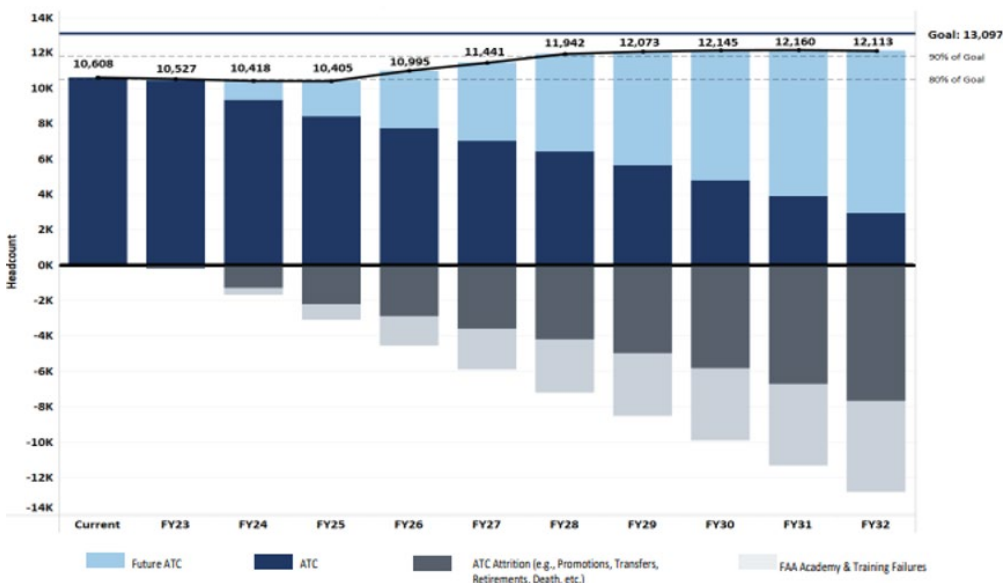
Significant changes to current operations could be achieved by using cross border operations, without necessarily moving staff from one ATC unit to another. A long-term measure with significant planning and re-organisation could alleviate some of the current bottlenecks. This would, however, require states to rethink the way Air Traffic is organised in their country.

➔ Mobility of ATCOs

Mobility of ATCOs (Eurocontrol 2022) has been assessed as a possibility. Intra-centre and intra-EU mobility are possible, but due to the regulatory requirements and the complexity of “detraining” and “retraining”, the ATCOs are limited only to a short-term measure.

➔ Overtime

Is being used by many Air Navigation Service Providers (ANSP) in mandatory or voluntary forms to overcome the current situation, but it is limited. Although this might alleviate a shortage



of capacity for a certain limited amount of time, it is not an infinite measure and all the States are challenged to train more Air Traffic Controllers.

➔ Increasing retirement age

Retirement for ATCOs varies throughout the world and different changes in national pension age, or age discrimination laws, have led some of the states to increase the pension age for ATCOs. A recent study (Baumgartner et al., 2024) co-financed by the Swiss Member Association of IFATCA, Helvetica and Skyguide (Swiss ANSP), motivated by the government increase of the pension age of ATCOs from 56 to 60, has come to the conclusion that a psycho-cognitive decline due to age can be measured and poses significant challenges to be managed.

The economical costs of the shortage

The Eurocontrol Performance Review Commission calculates the cost for en-route delays in the ECAC Area (22,4 million minutes) to 2.1 Billion Euros for 2024¹. The shortage of ATCOs has been estimated at 800 Million Euros for users in 2022 (**EUROCONTROL Think Paper #19 – ATC Mobility and Capacity Shortfalls | EUROCONTROL**)

Under the Single European Sky Performance Scheme, States have to indicate the reason for delays when imposing delays on users. According to the PRR 2024, 38,8% of delays were due to missing capacity and 13,8% due to staff shortage. Structurally speaking, the missing ATC Capacity can be associated to a missing number of ATCO to staff the ideal number of sectors, but it is not only dependant on the number of ATCOs, but also a lack of frequencies, hardware and software limiting the number of sectors that can be opened.

Missing capacity is not evenly spread throughout Europe and the US: some ATC units are sufficiently staffed or have spare capacity due to changing traffic patterns. In Europe, for the base-line scenario, of traffic growth 700-800 ATCOs are currently missing

in the core area. At an estimated cost of 600K€, the investment in sufficient ATCOs for the overall system would cost approximately €50-200 Million as a one-off investment compared to the yearly €800M the missing capacity costs the airlines.

Other components of the perfect storm are the **geo-political situation** blocking large chunks of airspace in the Eastern part of Europe and the Middle East. This has had some dramatic impact on the management of the traffic flows. In the US, recent government incentives to reduce the number of SES performance schemes, limits long-term investment and puts pressure on the cost basis, which includes the hiring and training of new ATCOs needed. One of the reasons listed for the understaffed FAA ATO system over the years is illustrated by several events which significantly impacted the successful hiring, training and certification of ATCOs. Sequestrations and government shutdown as well as COVID.

The expansion plans of some of the airlines (Ryanair ordered 300 aircraft, as well as Turkish Airlines which are to be delivered into the system in less than a decade) are not incorporated into the equation.

Is there a way out?

If air traffic continues to increase as in 2024 no real solution is available in the short term. The aviation sector will have to make a combined effort to attract the next generation of aviation professionals. Lesser numbers of talent are available and the selection as well as the training successes have not changed in the last 20 years. In Europe, to train one successful ATCO you need 400 young people entering the selection process. Compared to Pilot Training the ATM sector is unable to bring the ATCO to an operational maturity in a simulator environment. The duration of training an ATCO is on average 30-43 months, both in the US and Europe. Maybe simulator manufacturers should encourage greater investment into ATM simulators. New Large Language Model could maybe help to

better simulate the operational reality in a simulator environment.

Certainly, for Europe the European Commission could de-couple the recruitment and training costs from the cost-efficiency target of the regulated entities in order to give some economical breathing space to train enough controllers, just to manage the demographic challenges that are looming.

Further, there seems to be a bottleneck of training places for new entrants in Europe as well as in the US. This could be addressed by common training alliances where the training facilities would assist each other by providing a maximum of training spaces. ALWAYS guaranteeing the highest level of quality to deliver the safety standards in the training processes and not only putting "Body on seats"

But from a conceptual point of view, we will also have to engage in a real debate on how traffic is managed. To create capacity the sectors have been reduced and split into smaller pieces to allow the ATCO to handle the traffic from a psycho-cognitive point of view.

A more network centric approach is needed, with the assistance of new technology, network operations will have to be favoured. Airlines could be asked to stick to one flight plan and not game the network with multiple flight plans, the predictability could be increased, and all the ATC units could be invited to focus on the first wave of traffic in the morning.

This are all small and homeopathic measures which will provide some small capacity gains, on the longer term, however, this cannot continue and therefore a fundamental overhaul of the management of traffic is required. Defragmentation needs to be seriously addressed and a new Airspace Management system has to be introduced to face the future challenges and support the development and the successful growth of the European Aviation Industry.◀

¹ The delay has been monetarised using the results of the University of Westminster Study. The system wide average of 127 Euro (adjusted for inflation) per 1 minute of en-route ATM delay has been used.

ICAO REGIONAL WORKSHOP

GENDER EQUALITY AND EMPOWERING WOMEN IN AVIATION

➤ BY ELIZABETH BEAUMONT, CO-CHAIR OF THE EQUITY DIVERSITY AND INCLUSION (EDI) TASK FORCE



I was recently honored to attend and represent IFATCA and ATCOs around the world as the Co-Chair of the Equity Diversity and Inclusion (EDI) Task Force at the "ICAO Regional Workshop on Gender Equality and Empowering Women in Aviation". This was held 4-5 March 2025, in Almaty, Kazakhstan. As this was my first time representing the IFATCA EDI Task Force solo and considering Diversity, Equity and Inclusion (DEI) has been under attack in the western hemisphere, I honestly wasn't sure what to expect. I quickly learned that I am privileged to be a part of a powerful group of professionals, who continue to fight for DEI throughout the aviation industry.

Knowing that women only make up 20% of the ATCO workforce WORLDWIDE, it was a wonderful surprise to enter a room where 90% of it was filled with powerful, knowledgeable and eloquent female leadership. Competition didn't exist, as it soon became obvious that this workshop was about supporting one another through education. Topics such as: Inspiring Young Women, Gender Equality Success Stories in Aviation, Mentoring for Success, Modern Programs to Attract Young People and Girls to Aviation, along with Education Initiatives and Scholarship Programs filled our agenda and focused on the importance of recruitment and retention.

We heard from Diana Ibrayeva, a female B737 captain, who is only 1 of 2 women who maintain that rating, for SCAT airlines. Dr. Francine Carron, an ESG Consultant from Vrije Universiteit Brussel, reminded us that we need to change the narrative and take away gender bias in the ATC field. Antonio



Gonzalez Gomez, EASA (European Union Aviation Safety Agency) pointed out that it shouldn't matter who is presenting (man or woman), but we should instead focus on the message and/or the safety issue.

One of my favorite parts of the conference was the presentation by Milena Bowman, Executive Manager Eurocontrol. In her presentation on mentoring, everyone was given a handout pertaining to learning styles. We filled in our own questionnaire and discovered what our predominant learning style was. The key to this was to discover where our personal strengths and weaknesses lie. By doing so, we can excel not just in our daily job, but also in our capacity to train others and ultimately lead, not to mention in our personal relationships as well.

When I was selected as the co-chair for EDI, my mantra quickly became "Awareness Through Education". I wondered if the reason people were resistant to DEI is because they don't truly understand it? By offering the opportunity of understanding

through education, this allows people to embrace the idea that each of us are uniquely different and brings a variety of strengths to this profession. My personal word for 2025 is "perspective": taking a moment to see things through someone else's eyes, allows us to open a world of possibilities and new understanding by simply looking from a different vantage point. This incredible conference reminded me that everyone, no matter your skin color, gender, age, or beliefs, brings something of value to the table; even though we are all different, each of us is a vital addition. By accepting this and viewing things from others' perspectives, we ensure our profession has the ability to become stronger and ultimately safer. As ATCOs, we can achieve this by putting our expectations to the side when we speak with co-workers or train someone. We might even learn a new technique! By opening up our workforce to people of all races, genders and beliefs, it ensures the opportunity for our profession to hire the most qualified, skilled and competent people for the job. And just like a well-tended garden (which requires different components to make it productive), diversity cultivates the future of safety

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IFATCA @ ICAO

GNSS BRIEFING

➤ **BY DAVID PERKS, LIAISON OFFICER TO THE ICAO AIR NAVIGATION COMMISSION**



At the invitation of the ICAO Secretariat, IFATCA joined the International Coordinating Council of Aerospace Industries Association (ICCAIA), the International Air Transport Association (IATA), the International Federation of Air Line Pilots' Associations (IFALPA) and the Civil Air Navigation Services Organisation (CANSO) in delivering an informal briefing to the ICAO Council on the challenges posed by GNSS Radio Frequency Interference (GNSS RFI).

GNSS RFI is the disruption of the signals used by satellite systems like GPS, GLONASS and Galileo, and poses a significant threat to air operations due to the effects

on an aircraft's communication, navigation and surveillance systems. The briefing provided the ICAO Council with the unique opportunity to hear from representatives from some industry organisations whose members are directly affected by GNSS RFI.

I had the privilege of presenting on behalf of IFATCA and I emphasised the effect on air traffic controllers, particularly the implications for pilot-controller communications, surveillance and the separation minima required between aircraft. I also addressed short-term mitigation strategies that may be effective whilst more robust technical solutions are being developed.

This is the first time IFATCA has been invited to present to the ICAO Council. The opportunity to present the perspective of air traffic controllers to the highest and most influential forum in world aviation, and then to have a say in developing the standards, recommended practices and procedures, is a privilege only afforded to a few industry organisations. IFATCA is proud to be the global voice of air traffic controllers.

ONGOING GNSS RFI INITIATIVES

IFATCA has established an informal dialogue with SkAI, a Swiss company



specialising in, amongst other things, GNSS interference detection. Leveraging off their existing tool that detects real-time incidences of GNSS RFI, discussions are ongoing regarding the development of an application that would alert ATC supervisors in real-time not only when GNSS RFI is occurring within their area of responsibility, but also aircraft that experienced GNSS RFI outside their area of responsibility and/or are experiencing an ongoing degradation in their navigational capability.

IFATCA is also advocating for the development of standard phraseology for air traffic controllers and pilots to report incidences of GNSS RFI,

including where aircraft experience sudden lateral and/or vertical manoeuvres.

Finally, IFATCA is advocating for the retention of enough ground-based navigational aids, a Minimum Operational Network or 'MON', such that aircraft experiencing GNSS RFI can still accurately and safely navigate if GNSS is unreliable or not available.

YOUR ICAO REPRESENTATIVES

As our annual conference approaches, I might take this opportunity to remind you of your hard-working representatives here at the ICAO. IFATCA nominates these people

as independent experts, and they participate in several ICAO panels and working groups. They continue to ensure that the views of air traffic controllers are always considered when developing standards, recommended practices, and procedures. Feel free to contact them if you have any questions or queries.

david.perks@ifatca.org

Expert Group	IFATCA Nominee (State, MA)	Email
Aerodrome Design and Operations Panel (ADOP)	Bridget Gee (US, NATCA)	bridget.gee@ifatca.org
ATM Operations Panel (ATMOPSP)	Kenrick Taylor (Australia, Civil Air)	rick.taylor@ifatca.org
ATM Requirements and Performance Panel (ATMRPP)	De Wei Lim (Singapore, ATCAS)	dewei.lim@ifatca.org
Operational Datalink Working Group (CP-OPDLWG)	Markus Johnston (Australia, Civil Air)	markus.johnston@ifatca.org
Flight Operations Panel (FLTOPSP)	Oliviero Barsanti (Italy, ANACNA)	oliviero.barsanti@ifatca.org
Instrument Flight Procedures Panel (IFPP)	John Langa Tembo (Zambia, GATCOZ)	john.tembo@ifatca.org
Meteorological Panel (METP)	Eric Avila (US, NATCA)	eric.avila@ifatca.org
Personnel, Training and Licensing Panel (PTLP)	Ausra Straume (Latvia, LATCA)	ausra.straume@ifatca.org
Remotely Piloted Aircraft Systems Panel (RPASP)	Eugenio Diotalevi (Italy, ANACNA)	eugenio.diotalevi@ifatca.org
Separation and Airspace Safety Panel (SASP)	David Perks (Australia, Civil Air)	david.perks@ifatca.org
Safety Management Panel (SMP)	Andrew Belshaw (UK, GATCO)	andrew.belshaw@ifatca.org
Surveillance Panel (SP)	Ignacio Baca (Spain, USCA)	ignacio.baca@ifatca.org

PLC 2024-2025 UPDATE

PROFESSIONAL AND LEGAL COMMITTEE WORK PROGRAMME

➤ BY ADAM EXLEY, CHAIR IFATCA PROFESSIONAL AND LEGAL COMMITTEE



IFATCA's Professional and Legal Committee (PLC) is one of the four standing committees of the Federation. The committee reviews and updates policies in the TPM researches future implementations of licensing and rostering systems and ensures that air traffic controllers remain at the heart of all decision-making. This is no small task, given the global staffing shortages alongside increasing traffic levels.

The PLC comprises 12 fully elected Member Associations (MAs): **Italy, the Netherlands, Romania, Slovenia, Greece, Japan, Jamaica, Australia, South Africa, Hong Kong, Singapore, and Belgium.** Special thanks go to the USA, which stepped down despite being elected to the committee to allow another MA to receive full funding throughout the year. We have also seen active corresponding membership this year, with excellent

participation from Spain, Iceland, and Germany. Their contributions have provided a thorough review of our working papers.

The working programme is set following the conference and incorporates input from conference discussions and Job Card submissions from MAs leading up to and shortly after the event. You must share your views with IFATCA through these channels so we can direct our efforts effectively.

Following discussions with the EVPP and, more broadly, the Executive Board, the programme is finalised, and the committee begins its work throughout the year. There are two draft submission deadlines ahead of the in-person meetings. PLC also makes use of instant messaging and video conferencing platforms to collaborate between formal meetings. This year, some of the key topics

covered included positive safety cultures and just cultures, Low Traffic Licences, attracting new ATCOs, and contrail avoidance, among others.

Throughout the working year, PLC met in some incredible locations. First, we had the pleasure of spending three days in Osaka, Japan. The PLC was kindly hosted by JFATC, which provided an excellent meeting venue, as well as tours of the Osaka Airport Tower and control centre. We also had the opportunity to visit its training facility. Over the three days, we worked through each paper and began formulating our policies following the research phase of Working Paper production. A big thank you to JFATC and Naoto Ishii for the precision and effort involved in hosting this meeting in such a large city.

The second meeting took place in January 2025 in the equally remarkable





Mexico City. The PLC met and worked alongside the TOC for two of the three days, fine-tuning policy statements and reviewing every working paper in great detail. PLC and TOC were privileged to hold the meeting at the ICAO North American, Central American, and Caribbean Regional Office (NACC) and were given a tour of the facilities, hosted by the Mexican ANSP, Servicios a la Navegación en el Espacio Aéreo Mexicano (SENEAM). Sincere thanks go to Josue Gonzalez and Christopher Barks of ICAO for coordinating the meeting. Additional thanks go to Danahe Lopez, Lupita Hernandez, Raquel Lopez, Hugo Barron, and Miguel Castillo.

If you would like to be more involved in the PLC, there are several ways to do so. MAs may run for elected seats, with elected members typically producing a paper or other resources for the Federation on an assigned topic. There are two meetings annually that the designated individual is required to attend. With a change in Chair and EVPP this year, the locations for these meetings will be determined shortly after the conference. It is often expected that at least one meeting will be held in Europe, although this year was an exception.

Another option is to consider becoming a corresponding member of PLC. The difference is that IFATCA does not cover any costs. Where elected members get accommodation and sustenance expenses covered, corresponding members do not.

A huge thanks should go to all the volunteers and their home associations. Through their hard work and dedication, taking time away from family and friends, we get to read the Working Papers you will read at the conference this year.

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TOC 2024-2025 UPDATE

TECHNICAL AND OPERATIONAL COMMITTEE WORK PROGRAMME

➤ **BY JAYMI STEINBERG, CHAIR IFATCA TECHNICAL AND OPERATIONAL COMMITTEE**



IFATCA's Technical and Operations Committee (TOC) serves as one of 4 Standing Committees (SC) of the Federation. The committee reviews and updates the policies in the Technical and Professional Manual (TPM), researches topics of interest to the Federation, shares input with the ICAO Panel representatives, and more.

TOC currently consists of 9 elected Member Associations (MA): **Canada, EGATS, Germany, Ghana, Hong Kong, Italy, Philippines, Singapore** and the **USA**. Several corresponding members have been very actively engaged throughout the year. TOC works alongside the ICAO Liaison Officer, David Perks, IFALPA Air Traffic Services (ATS) Liaison Kimmo Koivula, IFALPA representative to TOC, Kolja Bollhorst, and several of the ICAO Panel Representatives.

The TOC Chair sets the agenda for the committee each year at the conference. This working programme is decided in conjunction with the Executive Vice President Technical (EVPT) and takes into consideration

the federation's priorities as well as the available expertise on TOC. The committee members then create several drafts of their papers which are collaboratively worked on in an online environment. The feedback from these exchanges is critical, as it ensures a diverse array of viewpoints is considered. Some of the topics that will be presented at the conference in Abu Dhabi are GNSS RFI and Effects on ATM, Pressure Setting Monitoring, ATM System Interoperability, and updates to several policies (including locking in some of the provisional policies from the Singapore conference). The topics were selected to cover a variety of needs including supporting ICAO Panel Representatives (such as Rick Taylor composing his paper on Radio Communications Failures), supporting the broader ICAO Long Term Aspirational Goals (for example) updating environmental policies), updating the Technical and Professional Manual, and examining new and important topics.

During this cycle, TOC met in September 2024 in Madrid, Spain. Its members had the opportunity to meet with their IFALPA colleagues at INDRA. Having the IFALPA ATS committee present allows the organisations to foster their relationships and gain valuable feedback. The meeting was very well received by both groups. Philippe Domogala updated both committees on GNSS RFI, which was thorough and helped everyone to better understand the challenges the professions are facing. During their time together they also generated a timely and important joint statement regarding GNSS RFI. Special thanks to Ignacio Baca and Kimmo Koivula for all of their coordination efforts, as well as USCA (Unión Sindical de Controladores Aéreos). Additionally, many thanks to INDRA for hosting the meeting.

The second meeting was held in January 2025 in Mexico City, Mexico where TOC worked alongside with PLC to fine tune aspects of the papers and any policies suggested in them. The meeting featured many distinctive opportunities for the group including





meeting at the ICAO North American, Central American and Caribbean Regional Office (NACC) and visiting several air traffic facilities hosted by their ANSP Servicios a la Navegación en el Espacio Aéreo Mexicano (SENEAM). TOC would like to thank Josue Gonzalez and Christopher Barks of ICAO, for coordinating meeting space and providing refreshments. The group was also provided with a presentation pertaining to Mexico and Central America, as well as a generous lunch by INDRA. Colegio de Controladores de Tránsito Aéreo de México (COCTAM) was essential in the planning of this meeting. Their efforts and generosity in time, space, and funding made the meeting run smoothly. Thanks to COCTAM as a whole and specifically to Danahe Lopez, Lupita Hernandez, Raquel Lopez, Hugo Barron, and Miguel Castillo.

If you want to get involved in TOC there are different ways to do so. MAs may run for elected seats. These members would typically generate a paper or other resources for the Federation on an assigned topic. There are 2 meetings annually that they would be expected to attend in varying locations. The upcoming meetings planned for the next year are still in the planning phases, though it appears likely the first meeting will be in the European Region. Additionally, MAs may choose to have

corresponding members. The material difference is that IFATCA does not cover any expenses for corresponding members to attend. If an MA chooses to send a corresponding member, they will have to carry the cost of the attendance. Functionally they are the same, provided that the corresponding member provides content for the



committee, either through authoring papers or otherwise, and providing feedback to their peers. Several corresponding members will take to the stage in Abu Dhabi to showcase their work: Malaysia, Mexico, and Romania.

Thanks to all of our volunteers and their home associations. It is the hard work that they do on their own time that keeps the Federation running and allows us to represent our profession to the best of our ability.

If you have any questions, please don't hesitate to reach out to the TOC Chair (Jaymi Steinberg) or EVPT (Benjamin van der Sanden).

toc.chair@ifatca.org



THE CALM IN THE STORM

IFATCA'S COMMITMENT TO DIVERSITY, EQUITY, AND INCLUSION (DEI)

➤ **BY SVERRE IVAR ELSBAK, CHAIR IFATCA EQUITY, DIVERSITY AND EQUITY TASK FORCE**



Diversity, equity, and inclusion (DEI), or EDI as we like to call it in IFATCA, is under attack. Brutal forces in the Western hemisphere are spreading disinformation about EDI. The same forces are trying to spread more turmoil into an already chaotic world. They have made EDI political.

Human rights should never be made political. Neither should IFATCA. We are “the calm in the storm”, the eye in the hurricane. As ATCOs, we thrive under pressure. Things we cannot influence or change, we do not waste our time and effort with. When we see a conflict we can resolve, we do it. Every time. All the time. We are air traffic controllers.

IFATCA inherently believes in equity, diversity, and inclusion. We know it makes us stronger as an international organization. Our collaboration between member associations from all over the world is proof that EDI works. IFATCA believes that all of our members should feel safe, seen, valued, and included. Our members are IFATCA.

Equity is about fairness. It is recognizing that not everyone starts from the same place and that some face systemic barriers that others do not. We want everyone to thrive and be the best version of themselves. As a result, IFATCA flourishes as well.

Going forward, we need to keep our focus on what EDI is. We need to raise awareness through education. As of now, this also means that we need to invest time in educating people on what EDI is not.

Diversity is not about selecting someone based on their gender or skin color simply to fill a quota. It is about representation. We acknowledge

that many industries in the past, like aviation, have been dominated by certain groups. Diversity works to adjust that imbalance, and with that, make our industry even stronger.

EDI is not about selecting the “less qualified” person. The idea that ANSPs and Airlines are selecting unqualified people to check a diversity box is absurd. Aviation standards are governed through the obtention of licenses and medical requirements. These are, and always will be, the only criteria by which people are chosen as air traffic controllers and pilots. Because there is such a thing as unconscious bias, employers may unknowingly select candidates based

on them. EDI helps employers realize that the most qualified candidates do not necessarily fit into a specific pattern.

IFATCA will continue to raise awareness about equity, diversity, and inclusion, through the education of our members. EDI is fundamental in the way forward for IFATCA. Together we will navigate through these difficult and chaotic times, and make sure that all our members feel safe, seen, valued, and included.

Remember, our members are IFATCA.

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WAR ON DEI



The calm in the storm - IFATCA's commitment to DEI

SHARING RESOURCES - SHARING SAFETY

➤ MARIJA SAVIC, IFATCA'S MENTAL WELLBEING TASK FORCE



In recent years, the importance of mental health has become increasingly recognized across various industries, including air traffic control. Therefore, in October 2023 the Wellbeing Task Force (WTF) was formed. Initially consisting of four members, the task force was surveyed at the 2024 Singapore conference, which provided an overview of the global need for mental health and wellbeing interventions among our colleagues.

Following the survey, it was decided to expand the task force to amplify efforts in promoting mental health and well-being, as well as to review and collect materials related to Critical Incident Stress Management (CISM) and peer support procedures relevant to air traffic controllers. The task force is structured into four streams:

- Stream 1: CISM
- Stream 2: Peer Support for wellbeing & life stressors
- Stream 3: Peer Support Program Management
- Stream 4: Awareness, destigmatization, and mental health promotion

The last stream is specifically focused on raising awareness about mental health, reducing stigma, and promoting mental well-being through the creation and promotion of educational materials. One of the key outcomes of these efforts is the establishment of a comprehensive digital repository designed to centralize these resources and make them accessible to Member Associations (MAs).

This article will delve into the details of this digital repository, known as the IFATCA Wellbeing - MA material, and provide step-by-step instructions on how to access and utilize its resources.

The IFATCA Wellbeing Repository

The IFATCA Wellbeing repository is a secure and organized platform hosted on the IFATCA server. It serves as a central hub for mental health-related materials, including

research documents, peer support and CISM guidelines, and social media promotional content that MAs can use in promoting mental health among their members as well as promoting their CISM or Peer Support programs. The repository is structured to ensure that users can easily locate and utilize the resources they need.

The IFATCA Wellbeing repository implements a structured access system to ensure proper control and distribution of materials:

1. One representative from each Member Association (MA) is granted access to the drive
2. Content managers have additional privileges to add, edit and manage content
3. Managers possess full rights to oversee and administer the drive

This structured approach ensures that valuable mental health resources are securely stored, easily accessible to MA representatives and protected from unauthorized modification or deletion.

To access the IFATCA Wellbeing repository, each Member Association (MA) should select a representative and authorize them to use the directory. The designated representative must fill out the following form:

<https://tinyurl.com/ifatcaWellbeing>

Once the form is submitted, a member of Stream 4 will grant access to the representative, enabling them to use the repository.

Repository Structure

The repository is organized into the following folders:

- Mental Health: Contains educational materials, mental health promotion and social media content
- Industry Documents: Features aviation industry documents, regulations and best practices.
- CISM (Critical Incident Stress Management): Includes guidelines and resources for CISM.
- Peer Support: Contains documents related to peer support management and practices.
- New Materials add HERE! : A folder for adding new documents and resources. The managers of the drive will ensure that content is distributed to its appropriate folder.
- The repository also includes a folder designated for sensitive materials. This folder contains confidential documents that require careful handling. Please exercise caution when accessing this folder, as the materials are sensitive and personal and should only be shared among our community and for educational purposes.

Our dear colleagues, we encourage you all to participate in this collaborative effort by sharing your experiences and knowledge through the IFATCA Wellbeing repository. By contributing, we can collectively enhance mental health awareness and support within the air traffic control community. Your active involvement is crucial to the success of this initiative, and we look forward to your contributions.

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AIRSPACE WORLD 2025



SHAPING THE FUTURE OF AIR TRAFFIC MANAGEMENT — TOGETHER

➤ **BY EDUARDO GARCIA, SENIOR MANAGER FUTURE SKIES, CANSO**

Airspace World is back – and bigger than ever. From 13–15 May 2025, the global air traffic management (ATM) community will gather at Feria Internacional de Lisboa, Portugal, for the world’s largest ATM event. Organised by CANSO, Airspace World 2025 promises an unparalleled opportunity for professionals across the aviation ecosystem to connect, collaborate, and co-create the future of our skies.

With over 200 exhibitors, five theatres, and a dynamic programme featuring high-level panels, technical briefings, and strategic dialogues, this year’s event will offer a rich platform for exploring innovation, resilience, sustainability, and talent development in ATM.

High-Level Thought Leadership: From Vision to Action

Discussions will also delve into the changing nature of the ATM workforce, the human implications of increasing automation, and how the industry must come together to address complex challenges such as civil-

military coordination, trajectory-based operations, and aviation resilience in the face of shifting geopolitical, environmental, and technological pressures.

Importantly, IFATCA will be actively engaged in these high-level conversations, contributing valuable insights on the operational and human factors at play in the future ATM landscape.

CANSO has curated a series of flagship panel discussions designed to bring together senior leaders and experts from across the industry

to explore global aviation’s most pressing and transformative issues. These sessions will tackle the big questions facing our skies today and tomorrow – from reimagining air traffic management and delivering on sustainability goals, to how we strengthen safety and resilience in a more connected, cyber-aware environment, and adapt economic models to support system evolution. In the “Elevating Safety Together” panel, **Frédéric Deleau**, IFATCA Executive Vice President Europe, will share the federation’s perspectives on collaborative safety strategies.

AIRSPACE WORLD
BROUGHT TO YOU BY **CANSO**

FUTURE SKIES
Tomorrow's Voices

Lisbon

13-15 May 2025

Greg Okeroa, representing IFATCA's Equity, Diversity and Inclusion Task Force, will join the "Onboarding the Next Wave of Talent" panel supported by EUROCONTROL. Greg will also participate in "Navigating Change: The Human Implications of the CATS Global Council's Concept of Operations", a panel that brings together CANSO's leadership and ATC unions to explore how automation, airspace redesign, and new operational models will affect the role of controllers and frontline personnel. The discussion will focus on training, workload, liability, workforce adaptation, and collaboration between management and labour.

Nicola Ní Riada, IFATCA Communications Coordinator, will contribute to the Tomorrow's Voices panel focused on what the industry expects from the next generation of aerospace professionals.

Tomorrow's Voices: Empowering the Next Generation

CANSO is proud to spotlight emerging talent through Tomorrow's Voices, a dedicated initiative designed

to connect young professionals, students, and early-career individuals with leaders from across the aviation sector. Taking place at the Viasat Tomorrow's Voices Theatre, the programme features:

- CEO Breakfasts with aviation leaders
- Interactive panels on career pathways, skills of the future, diversity, equity and inclusion (DEI), and expectations of the next generation
- Workshops, inspiring tours, and engaging networking activities
- A fun Scavenger Hunt, helping participants connect with industry innovators and exhibitors

One of the most anticipated moments of the programme is the CEO Breakfast – a relaxed, informal gathering where young professionals can connect directly with aviation leaders over coffee and conversation. We are pleased that Helena Sjöström Falk, President and CEO of IFATCA, will be joining the breakfast to engage

with the next generation of ATM professionals.

Why You Should Join Us in Lisbon

Airspace World 2025 is a chance for the ATM community to come together – to exchange ideas, discuss the topics that matter, and reflect on how we navigate change, together.

Whether you're an air traffic controller, safety expert, engineer, or student, it's an opportunity to connect with peers, share experiences, and contribute to the conversations shaping the future of our profession.

We look forward to seeing many from the IFATCA community in Lisbon – and continuing the dialogue that keeps our skies safe, inclusive, and evolving.

Feira Internacional de Lisboa, venue of 2025 edition of Airspace World

credit: Osvaldo Gago/wikimedia © BY-SA 3.0

LISBON, PORTUGAL
13-15 MAY 2025
BROUGHT TO YOU BY **CANSO**

THE FUTURE WORKFORCE

DEVELOPING THE FUTURE WORKFORCE: COLLABORATIVELY CREATING A SUSTAINABLE FUTURE IN THE AVIATION AND AEROSPACE SECTORS.

➤ BY GLOBAL AVIATION & AEROSPACE TASK FORCE

The aviation and aerospace industries are facing an unprecedented challenge in attracting, retaining, and developing skilled professionals to meet growing demands. The Global Aviation and Aerospace Skills Taskforce (GAAST) was created as a response to this issue, bringing together states, regulators, international organizations, and companies. The goal of GAAST is to ensure workforce resilience through collaborative efforts, knowledge-sharing, and initiatives that address skills shortages and promote long-term sustainability.

GAAST is a taskforce created by a mix of States and Industry Associations on a voluntary basis in late 2023. It has cross-section of industry representation, ensuring each sector is covered, including aerospace, airlines, airports, air traffic management, cargo companies and ground handling as well as HR specialists.

The strength of GAAST is in its cross-industry collaboration and collective knowledge. Its benefit will only be realised by sharing. By exchanging information, experiences and examples, GAAST aims to help states and organizations globally create their own programmes for attraction, recruitment and retention of the future workforce helping ensure the successful future of the sector. By collaborating with the International Civil Aviation Organization (ICAO), GAAST will also be able to widen the audience it reaches as well as supporting the ICAO Next Generation of Aviation Professionals (NGAP) programme.

Why Was GAAST Created?

We know that we have challenges in how we communicate the opportunities in aerospace and aviation. There is a massive range of jobs and careers within aviation and aerospace which support the safety, security and resilience of the sector, from engineering to legal, project management to operational jobs. There are also many excellent programmes in all sectors, including examples of engagement with young children to apprenticeships and training programmes. GAAST does not aim to reinvent this work, rather enhance international coordination to share best practices and drive actionable solutions. By fostering collaboration, GAAST aims to support workforce inclusion and adaptability, ensuring the sector remains robust and competitive.

Key Workforce Challenges

The aviation and aerospace industries are projected to experience significant workforce demands over the coming decades across all job sectors and in all regions. The industry lost staff in the pandemic, who retired or never returned to work, there is an aging population in many regions and the industry struggles to compete for valuable resources. This is coupled with a prediction of growth in air travel and the resources that will be needed to support it.

Key statistics highlight the urgency of the issue:

- By 2043, nearly 700,000 new maintenance technicians will be needed.
- By 2030, 44% of the aerospace workforce in Europe is expected to retire.
- The demand for data analysts, software engineers, and systems architects is expected to grow by 35% by 2030.
- The perception of the industry is not positive in some regions, impacting the ability to attract new talent.
- Many job opportunities within the sector are not well known, further limiting workforce growth.

Addressing these challenges requires a concerted effort to improve industry perception, expand awareness of career opportunities, and implement effective talent retention strategies.

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GAAST Workstreams and Activities

To tackle workforce challenges, GAAST focuses on several critical questions:

1. How can we attract young people into aviation and aerospace?
2. What makes aviation and aerospace an appealing career choice where people want to work, develop, and grow?
3. How can aviation and aerospace compete with other industries for top talent?
4. What characteristics define a great workplace in this sector?
5. What skills will be essential for the future workforce?

By addressing these questions, GAAST aims to develop strategies that ensure the industry remains competitive, sustainable, and attractive to new generations of professionals. To most effectively divide the work, GAAST operates through five workstreams designed to cover key aspects of the workforce issue, foster collaboration and identify solutions.

Key activities include:

- Virtual working groups presenting case studies across all workstreams.
- In-person meetings to bring together the whole taskforce.
- Surveys conducted with individuals and organizations to gather data, identify gaps, and determine key workforce requirements.
- Definition of website and repository requirements for best practices and case studies.
- Development of skills maps and career pathways for different sectors within aviation and aerospace.
- Exploration of skills and training transferability, including the creation of common definitions.
- Drafting of future work plans and agreements for collaboration with the ICAO NGAP programme.

Through these initiatives, GAAST is working toward a more comprehensive understanding of workforce challenges and best practices for overcoming them.

Workstream	Description	Deliverables
1. Value proposition	Analyse, describe and measure the current perception and define the value proposition of the sector. And identify ways to improve perceptions	Value proposition statement Considerations of different audiences
2. Attraction & Outreach	Explore innovative outreach and methods for attracting diverse, untapped talent into the sectors, including pulling on best practice	Repository and case studies Report on attraction & outreach
3. Retention & development	Identify and share best practice for retention and development of the existing workforce , including new pathways, reskilling and career mobility	Repository and case studies – focus on career pathways, transferable skills, etc. Summary report
4. Workplace environment & culture	Encourage safe, inclusive, accessible and positive workplace cultures	Repository and best practice and toolkit
5. Evolution of work in the industry	Create a vision of the sectors up to 2050 , including what skills, technologies workers and culture will be needed	Vision statement Roadmap Repository population and toolkit



Survey Insights

A critical component of GAAST's work has been gathering insights through surveys. Key findings from over 1,000 individuals and 50 organizations include:

- Both individuals and organizations identified pay and conditions as important factors in workforce decisions.
- Individuals emphasized work-life balance, job stability, and overall job satisfaction as crucial considerations.
- Organizations cited staff loss and competition with other industries as their primary concerns.
- These insights highlight the need for targeted strategies that improve job attractiveness, enhance employee satisfaction, and strengthen retention efforts.

Next Steps and Deliverables

To achieve its objectives, GAAST has outlined several key deliverables:

- Conducting additional targeted research and outreach to refine workforce strategies.
- Collecting and standardizing best practices and case studies to serve as industry benchmarks.
- Developing an online repository to house best practices, career pathways, and resources for states and organizations.
- Presenting GAAST's findings and recommendations at the 42nd ICAO Assembly, to cement the relationship between GAAST and the ICAO NGAP Programme.

These initiatives will ensure that GAAST continues to make meaningful progress in addressing workforce challenges and shaping the future of aviation and aerospace employment.

Conclusion

Global collaboration between States, industry organizations, educational institutions, and international organizations is critical to ensure a sustainable workforce. GAAST was created to facilitate this collaboration, creating a platform to share and learn from each other. By focusing on workforce attraction, skills development, and retention strategies, GAAST aims to secure a strong and competitive workforce for the future.

Through continued research, outreach, and collaboration, the taskforce will play a vital role in shaping the next generation of aviation and aerospace professionals. GAAST welcomes contributions to our repository of best practice and case studies; the wider range and depth of resources that GAAST can gather, the greater the global impact it will have.

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<https://iccaia.org/policy/gaast/>



Global Aviation & Aerospace Skills Taskforce

Developing the Workforce for the Future

MANAGING TODAY'S BUSY SKIES

► BY MICHELLE BISHOP, DIRECTOR OF PROGRAMMES, CANSO



As global air traffic volumes recover to and, in many cases, exceed 2019 levels, the aviation industry is once again confronted with the challenges of congestion and capacity management. One of the most pressing concerns is ensuring that air traffic management organizations have adequate staffing to meet increasing demand. Many countries are experiencing staffing shortages due to factors ranging from disruptions in training programs during the pandemic to broader recruitment challenges. Failing to address these issues will have ongoing wellness impacts on staff and service quality issues for customers.

Recognizing this as a strategic priority, the Civil Air Navigation Services Organization (CANSO) has initiated a dual approach to help its members tackle the issues related to air traffic controller (ATC) recruitment and training on a global scale. This effort aims to ensure that the ATM industry remains robust and capable of supporting growing air traffic needs.

Recruiting Tomorrow's Workforce Today

Air traffic control has been regarded as an attractive career choice, yet awareness of the profession remains limited among younger generations. In recent years, shifts in recruitment dynamics and evolving career expectations have contributed to a decline in the number of applicants, making it more difficult for many regions to meet their staffing requirements. To overcome these challenges, aviation organizations need to modernise their recruitment strategies and leverage new channels of outreach.

To explore these challenges in-depth, CANSO recently hosted a two-part webinar series focused on ATC recruitment. The first session examined generational differences in career expectations, particularly the perspectives of Generation Z, and explored how aviation organizations can tailor their engagement strategies to resonate with this emerging workforce. While traditional recruitment methods previously employed by air

navigation service providers (ANSPs) are no longer delivering the required candidate numbers, experts and industry practitioners shared insights on effective recruitment approaches that could be adapted within the ATM sector.

The second webinar in the series analyzed innovative career marketing and recruitment campaigns by looking at specific campaigns and innovative initiatives. The session looked at how ANSPs are re-evaluating their strategies, incorporating new communication channels, and reshaping their employer value propositions to better connect with prospective candidates.

This session highlighted examples of adjustments being made to messaging to appeal to younger job seekers, and ways of integrating digital platforms into outreach efforts and crafting more engaging recruitment narratives. Sharing best practices and evidence-based insights has proven to be an invaluable tool for organizations seeking to refine their approach to attracting and retaining talent in the ATM sector.

Enhancing ATC Training for a Sustainable Future

Beyond the challenges of recruitment, improving training programs for students is an equally critical component of addressing ATC staffing challenges. In early 2025, CANSO

convened a roundtable discussion with industry leaders to examine barriers to increasing ATC training capacity and efficiency. The objective was to identify practical, actionable changes that could lead to more effective training outcomes in both the near and medium term.

Expanding training capacity

One of the key topics discussed was the need to scale training programs to accommodate larger cohorts of students. While foundational classroom-based instruction can be expanded with relative ease, more advanced training stages face significant bottlenecks. These include limited simulator availability and constraints related to on-the-job training (OJT) opportunities in operational environments. Some ANSPs have begun implementing innovative solutions, but systemic challenges still restrict the industry's ability to significantly increase training throughput.

Reducing Factors Which Extend Training Timelines

A major point of discussion at the roundtable was the identification of training practices that unnecessarily prolong timelines without adding training value. Many industry stakeholders agreed that established methods should be re-evaluated to ensure they remain relevant and



effective. Localized discussions and feedback mechanisms can help identify outdated training elements that may be inefficient, yet persist due to longstanding traditions.

Participants discussed measures that would allow students to demonstrate certain competencies in high-fidelity simulation environments, similar to pilot training models. This could mitigate the issue of students waiting to experience certain infrequent situations by enabling them to practice scenarios in simulators and demonstrate competency, potentially shortening the OJT phase.

It was acknowledged that the more closely simulators mirror real-world operational systems, the easier the transition for students, thereby improving training efficiency. Nevertheless this is not the case in every instance.

Improving Training Success Rates

The roundtable also explored the concept of progressive licensing, an approach that allows trainees to obtain partial qualifications early in their

training journey. While not universally adopted

by ANSPs, evidence suggests that enabling students to gain incremental certifications fosters confidence, enhances skill retention, and ultimately increases overall qualification rates.

Additionally, the significance of individualized mentoring and coaching was emphasized. By fostering a growth mindset and recognizing the diverse learning styles of trainees, organizations can tailor their instructional approaches to better support student success. Given the critical role that instructors play in shaping the training experience, CANSO is considering the development of a best practices guide for ATC instructor selection and training. Addressing instructor shortages and optimizing teaching methodologies are key priorities to ensure that training programs continue to produce highly skilled controllers.

Looking Ahead: A Collaborative Approach

ATC staffing is not the only resource challenge facing some ANSPs, but it can be the most critical. Resolving ATC staffing shortages is a complex, long-term challenge that does not lend itself to quick fixes. Maintaining quality training programmes remains essential, and any proposed changes must be carefully evaluated. Reassessing legacy training practices, leveraging technological advancements, and expanding recruitment outreach efforts are necessary steps to ensure that ATM organizations are equipped to meet future air traffic demands. Engaging local staff in the identification of approaches is an important part of the process.

CANSO will continue to serve as a platform for dialogue, facilitating the exchange of ideas and the identification of innovative strategies that drive tangible improvements in recruitment and training. By working collaboratively to implement evidence-based solutions, the global ATM industry can build a resilient workforce capable of managing the evolving complexities of modern airspace.



FIRST EUROPEAN AIR TRAFFIC CONTROLLER SELECTION TEST - FEAST

THE PASSPORT TO HIGH-STANDARD AIR TRAFFIC CONTROL SELECTION. EMPOWERING EXCELLENCE IN THE SKIES

► **BY MARC DAMITZ, FEAST SERVICE MAANAGER EUROCONTROL**

Selecting the most promising candidate air traffic controllers is as vital as their timely and professional training. It is crucial to optimise the recruitment process and assess from the first steps which applicants have the right profile to fulfil this fantastic but demanding job.

The use of appropriate and valid selection and assessment tools is key to increasing the success rate in training and job performance. This is in the interest of both the organisation and the selected applicants and of course it contributes to safety standards in the provision of air navigation services. ATC selection poses a particular challenge due to its low base rate (few people can do the job), low historical selection success ratios, general staff shortages and lastly, the lengthy expensive training time required.

The FEAST test battery and service is a product of the EUROCONTROL Aviation Learning Centre. The purpose of FEAST is to assess the required knowledge, skills and abilities of applicants to optimize the success rate throughout the training period. The tests are made available for use by accredited users in civil and military Air Navigation Service Providers (ANSPs) and ATC training institutes.

FEAST transcends cultural and organizational boundaries having been welcomed by both European and non-European states, offering strategic and operational advantages in cost and time savings.

Since its launch in 2004, FEAST has become a recognized and scientifically sound option for ANSPs in Europe and beyond. Today 55 different organizations from Hong Kong

to Jamaica, from Iceland to Turkey test more than 20,000 candidates every year to select high calibre candidates fit for training and becoming licence-holding Air Traffic Controllers.

The FEAST has been a fundamental component of our organisation's National Development Plan, which is designed to identify our future Air Traffic Controllers (Ab-initios). This allows us to test an extensive number of ATCs, thereby saving us a significant quantity of time. It serves as an all-in-one examination facility for the necessary competencies (Dubai Air Navigation Services)

Key features

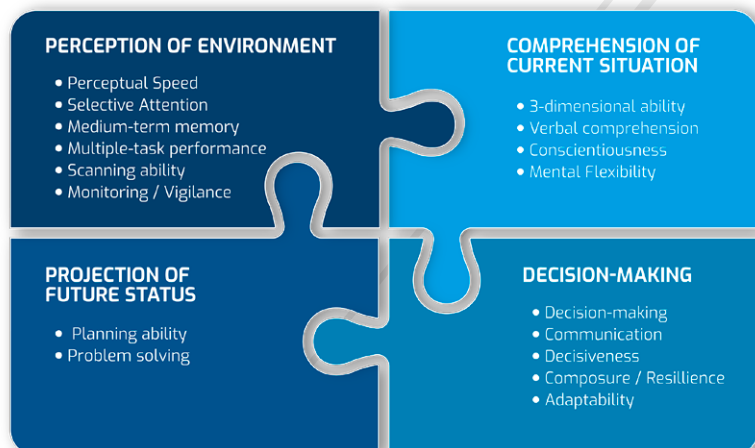
FEAST is a comprehensive, web-based platform offering objectivity, standardization, ease of use, and real-time results calculation. It includes:

- Cognitive ability tests: assessing multi-tasking, planning ability, learning and applying rules, processing speed and attention, and 3D visualization.
- English language listening and comprehension test.
- Two work sample tests.
- Personality Questionnaire.

Test sessions are conducted at approved and supervised testing sites at the premises of accredited Air Navigation Service Providers (ANSPs). A large number of applicants can be tested simultaneously, and the test scores and results are accessible in real-time and stored confidentially.

A FEAST test session is a multiple stage selection process. In the first phase, specific ATC-related cognitive abilities plus English language comprehension are tested to identify the candidates eligible to advance to the next stage. The second phase consists of two

CONTROLLER SKILLS & ABILITIES





battery to emphasize the importance of personality and behaviour in identifying suitable candidates. This questionnaire was revised in 2021 to include measures of resilience and decisiveness. In 2018, seven cognitive ability tests were introduced to assess spatial orientation, memory, perceptual speed, and sustained attention in greater detail. The current work sample tests were introduced in 2012 and 2022, respectively. Additionally, the English language listening and comprehension test, developed in cooperation with the Zurich University of Applied Sciences, was released in 2021.

Validation

The FEAST test battery – in its original version - was developed and tested between 2000 and 2005. The full service has run since 2006.

Since 2010, four studies on the predictive validity of the FEAST tests have been completed, including a validation of the cognitive ability tests, two of the work sample tests and the personality questionnaire. The studies established

a clear link between the FEAST test scores and later performance in the ATCO training.

Benefits in a nutshell

- Objectivity, fairness, and high-selection standards
- Predictive information about applicants' abilities, enabling good selection decisions to optimise training success rates
- Flexible and cost-effective tools providing ease of administration and standardised test conditions

- High-quality assurance in the test materials, test delivery and standards of test administration and application
- Continuous test development, maintenance and standards.

How can candidates prepare for the FEAST tests?

A FEAST Training Platform designed to help candidates familiarise with the tasks to be performed in a FEAST test session is available at <https://feast-training.eurocontrol.int>

It is free to use and offers a series of tests that capture the concept and principles behind the FEAST selection process. The intuitive dashboard allows applicants to check the results after each exercise and follow their evolution throughout ten different tests.

Having an internationally deployed system with a recognised high standard gives assurance to national civil aviation regulators and supervisory authorities that this part of the overall ATM process is up to standard and meets also their requirements.

FEAST complements the efforts of Air Navigation Service Providers to have the best qualified people sitting in the controlling seat. We look forward to demonstrating this selection tool to an even wider group of ANSPs and add to the 201,000 applicants tested since 2006.

Contacts

Further information is available at

www.feast.info

or by contacting Marc Damitz - FEAST Service Manager
EUROCONTROL - Aviation Learning Centre

marc.damitz@eurocontrol.int

work sample tests – one simulating the task of a radar controller, the other the work of a planner. The third one, a personality questionnaire, concludes the FEAST selection. Each test consists of 3 elements: instructions, practice exercises and the test itself.

The software application is hosted on a secure cloud platform, offering enhanced scalability, flexibility, and 24/7 global accessibility. This reliable solution enables

simultaneous testing of multiple candidates around the world.

Evolution along the years

To address evolving demands and findings related to the selection of Air Traffic Controllers, FEAST is regularly updated. In 2013, a personality questionnaire was added to the test

Our extensive experience with FEAST has shown that it is an exceptionally reliable tool for assessing the required skills for air traffic controllers. (Marina Morić, Head of Human Resources, Croatia Control)

AERO 2025 IN FRIEDRICHSHAFEN

ELECTRIC, HYDROGEN, AND SELF-LANDING AIRCRAFT

➤ BY PHILIPPE DOMOGALA. IFATCA INDUSTRY PARTNER COORDINATOR



AERO is always an excellent venue for witnessing innovations and startups preparing for the future. This year, EASA was present to discuss sustainability, the implications of the green deal, and a new term you will increasingly hear: conspicuity. This term represents a new form of anti-collision technology that replaces the 'see and avoid' concept with what is now referred to as ADS-L. While this primarily targets lower airspace users, we can expect to hear more about it moving forward, particularly after the Washington collision.

An intriguing discussion followed regarding hydrogen and electric aircraft, both of which are attracting significant investment and are heralded as part of the future. However, the timeline for this future depends not only on the aircraft themselves but also on the necessary infrastructure to support them.

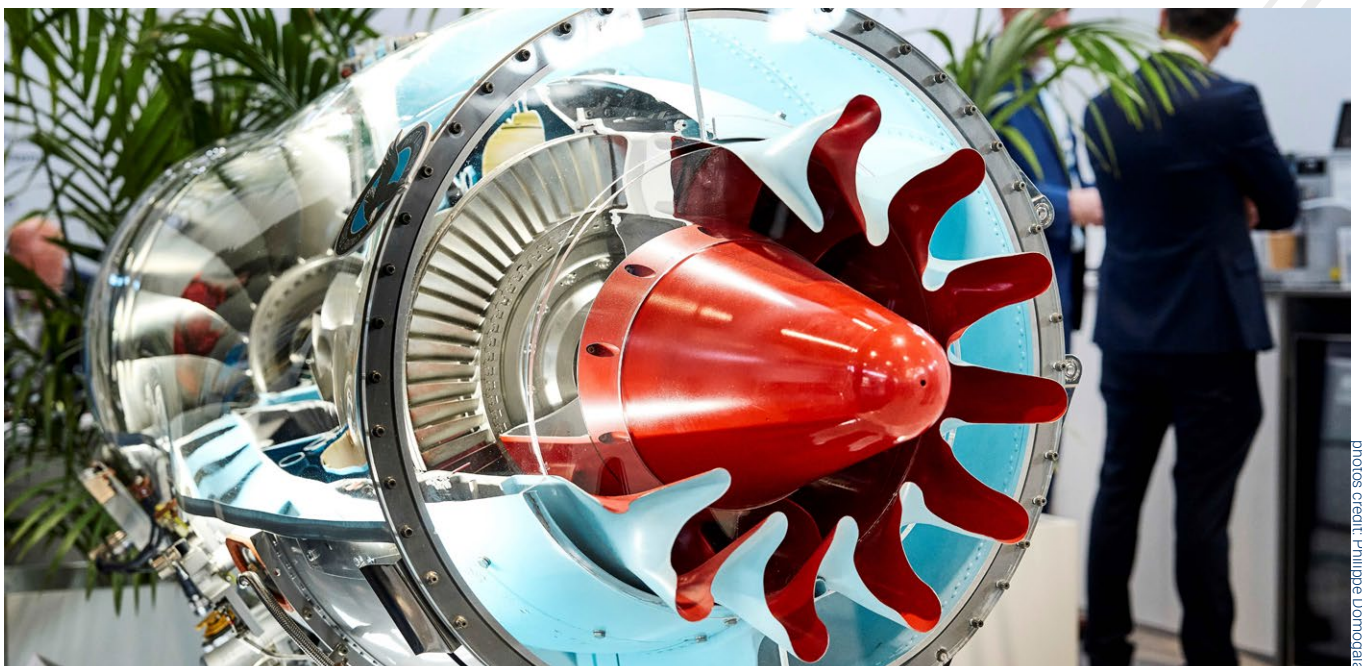
The initial challenge with hydrogen is its high storage cost—liquid hydrogen requires -253°C, while gaseous hydrogen necessitates special tanks capable of withstanding pressures up to 850 bars. Refueling an aircraft with hydrogen poses significant dangers, as the explosion risk is substantially greater than with conventional fuels. Moreover, leaks during refuelling are a persistent issue. Given these challenges, it



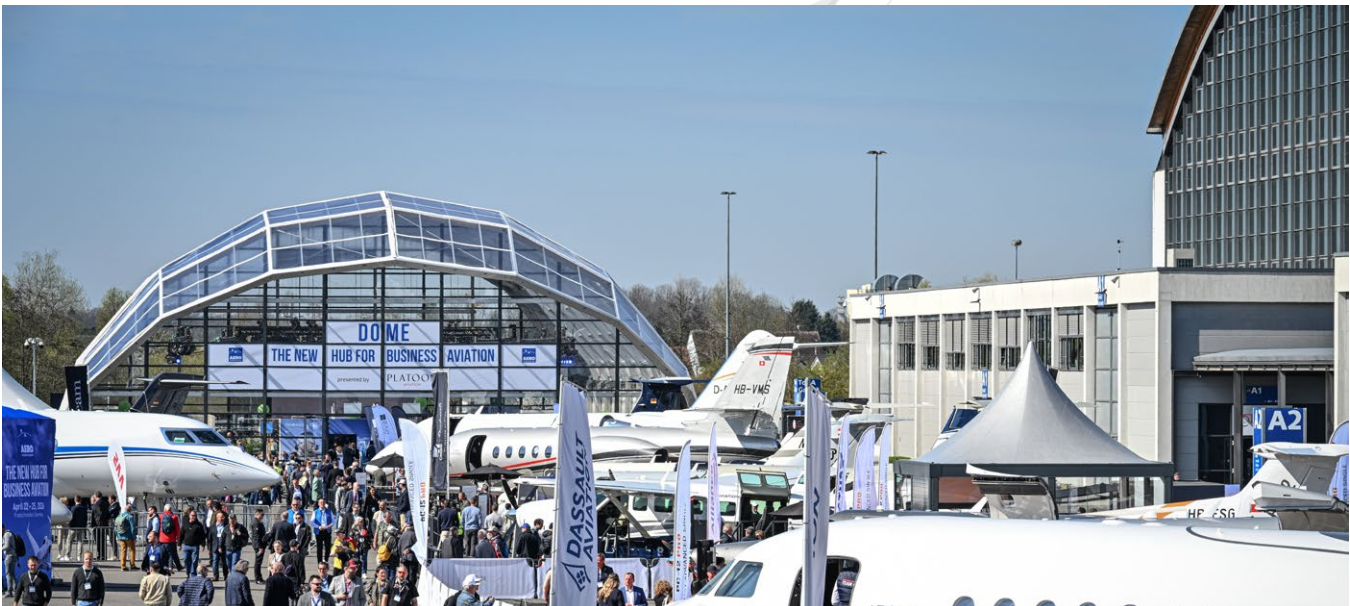
appears that the future of hydrogen aviation may extend beyond 2050.

Electric aircraft are currently the talk of the town for the immediate future. However, limitations on both range and battery weight are preventing any viable and profitable commercial utilisation at this time. Numerous projects are underway, with every manufacturer heavily investing in this technology, yet progress remains

largely confined to prototypes. The recent bankruptcies of two major electric VTOL taxi companies—Lilium and Volocopter—underscore that long-range aircraft are still a distant goal. To achieve long-range capabilities, substantial battery resources are necessary however, increasing battery weight reduces payload capacity, meaning fewer passengers. As the CEO of Daher, a prominent business aircraft manufacturer, stated, "If you want a long-range aircraft, you will design a flying battery." The best current hope is for hybrid propulsion, wherein a small portion of the thrust comes from electric power, while the aircraft carries a large generator using jet fuel to recharge the battery and extend range. Such aircraft are likely to become available within the next decade, capable of transporting



photos credit: Philippe Domogala



around 10-20 passengers over distances of 100-300 km at most.

This may be suitable for mountainous regions and inter-island commuting but offers limited broader applications. Refueling electric aircraft presents challenges for commercial aviation. It involves lengthy turnaround times—certainly a couple of hours—and the availability of charging stations. A schedule cannot be maintained if another aircraft occupies a planned recharge station.

Discussions about reservations and involving ATC to inform crews about the recharging situation are seriously underway, including the potential addition of electric recharge information on the ATIS.

The CEO of Smartflyer, a Swiss electric aircraft designer remarked, “We are so slow in introducing innovations

in aviation.” He pointed out that the difference between a 1968 Bonanza and a 2025 Cirrus lies in the cockpit, as both use similar wing designs and the identical Continental IO-560 engine. Regarding electronic innovations in the cockpit, the Garmin emergency Autoland, coupled with their new 4D autopilot, is beginning to revolutionise business aviation. It is only a matter of time before this technology reaches major airlines, which will undoubtedly reignite the debate surrounding the introduction of single-pilot operations, as it addresses safety concerns regarding pilot incapacity. Increasingly, business aircraft are being certified to carry this system, with the latest being the King Air. The current system can perform numerous functions, even engaging with passengers, opening doors, and shutting off fuel after landing.

In the realm of GPS jamming and spoofing, one small Chinese

company, Cya Aviation, is seizing the opportunity (they are always very quick to react!) by presenting 1930s navigation computers and handheld compasses at their stand! (see photo)

Each year brings its own unique set of innovations and challenges. The effects of the Trump administration's tariffs were too recent to cover comprehensively, but if the trade war between China and the USA continues into the coming year, the entire aviation sector will be affected, as we no longer have a singular national manufacturer. All components, engines, and avionics in general and business aviation are sourced from both the US and China, including Boeing, Airbus, and various Chinese aircraft manufacturers.

philippe.domogala@ifatca.org



Welcome Newest Industry Partners



ANNUAL CONFERENCE

28TH APRIL - 2ND MAY 2025
ABU DHABI

American



American Airlines is proud to become the newest IFATCA Industry Partner. We are excited to partner with IFATCA as we jointly begin the journey to improve the safety and efficiency of airspace around the world. American has led the industry in sustainable fuels, environmental impact and system efficiency and are proud to partner with the National Air Traffic Controllers Association (NATCA) in the United States. Together, we have teamed up to enhance the safety and efficiency of the U.S. National Airspace System in ways that benefit both our air traffic partners and the airline industry. Our desire is to build a similar working relationship with IFATCA and the important organizations you represent.

PROBOTEK

PROBOTEK – Professional Robotics, Advanced A.I, Enterprise IT Platforms & IoT Technologies an innovative leader in the IoD sector. Their professional services utilize cutting-edge proprietary technologies that exploit drone & UAV capabilities with the help of AI/ML and mission critical software platforms. PROBOTEK is also a major contributor in the open source community. For the aviation services sector: APOLLO Next-Gen STCA: an advanced Short Term Conflict Alert (STCA) system, engineered to monitor all aircraft in real-time delivering visual and auditory alerts to Air Traffic Controllers (ATCs) for the aircraft in possible conflict. The system maintains a log featuring two categories: soft collisions (indicated in yellow) and imminent collisions (indicated in purple), thereby assisting Air Traffic Controllers in making informed decisions promptly. APOLLO is compatible with any aviation RADAR and requires no integration, making it hardware and infrastructure agnostic for use in any air traffic control tower.



SAAB

Founded in 1937, Saab provides products, services, and solutions across both military defence and civil security sectors. With operations in over 100 locations across more than 45 countries, Saab continuously develops, adapts, and improves technology to meet customers' evolving needs. Saab creates aviation systems and services that support safe, predictable, and efficient operations. As a leading provider of proven Air Traffic Management (ATM) solutions, Saab transforms operations by turning ideas into reality. They are pioneers in Digital Remote Tower, delivering field proven A-SMGCS, Electronic Flight Strips etc. and their new Integrated Digital Tower Suite or IDTS is modular and scalable, integrating seamlessly into airports and approach facilities of all sizes civil and military. Saab's Collaborative Decision Making and Efficiency solutions provide tools to enhance performance at every stage of flight—reducing delays, cutting costs, and minimizing environmental impact. From multilateration and ADS-B to surface movement radar and vehicle tracking, Saab's surveillance solutions prevent incident and increase efficiency.



INTRODUCING: GLOBAL AIRSPACE RADAR

► BY VINCENT LAMBERCY, GLOBAL AIRSPACE RADAR



What is Global Airspace Radar?

Global Airspace Radar is a multi-channel publication which covers all aspects of airspace management. From ATC to integration of new entrants, from front line workers' priorities to long term strategical issues. We want to put all the important topics on the radar - pun intended.

What do you mean by "multi-channel"?

In today's world of information, people consume information in multiple ways and we want to offer our readers adapted ways of reading our content. The publication started with a website, newsletter, social media pages (LinkedIn, X, Instagram), and a podcast. Right now, we are experimenting with other social media platforms to see what works and what does not.

Who is behind Global Airspace Radar?

Global Airspace Radar is published by FoxATM. We are independent and work together with many parties to report a wide range of points of view. Partnering with industry organisations and events is a core part of the concept. We are partnering with IFATCA and will report on the annual conference and currently have media partnerships

with Airspace World and The Airport Show.

Is Global Airspace Radar really free and independent?

The publication is funded by selling advertising and sponsored content. In today's competitive publication world it's unlikely readers would pay to read content when there are so many other options available. All sponsored content is clearly identified as such and there are strict rules in place to separate editorial and financial aspects. Advertisers don't influence the internally developed content.

Do you really know what you're talking about?

The team is made up of a combined 80 years of expertise in airspace management, so there is a deep understanding of the topics being presented. Having worked with ANSPs (directly and as consultants), the team has 'walked in your shoes', working with ATCOs up to C-level executives at ANSPs, regulatory bodies, academics and industry representatives.

Why does Global Airspace Radar work with IFATCA?

As mentioned above, it is important to cover the industry from a variety of angles and perspectives. FoxATM has

been an IFATCA industry partner for a while because it helps us get direct input about what goes on in each organisation, understand what the current pain points are, and literally keep our fingers on the pulse of ATC. Global Airspace Radar would not be fully covering the industry without working with IFATCA.

However, we remain independent, we will not systematically line our opinion up with IFATCA but we will include the federation's views in our reporting.

We are always open for such ideas, let's talk.

You can contact the team at www.globalairspace radar.com

Contact me directly via

vincent.lambercy@globalairspace radar.com



Global Airspace Radar
Insights, analysis and the latest news

TRAINING Q&A

WITH OUR INDUSTRY PARTNERS

► COMPILED BY PHILIPPE DOMOGALA, INDUSTRY PARTNER COORD.

To try and get to know them better, we asked our Industry Partners the following questions:

1. What innovation in training would you love to see introduced to ATCO training?
2. What part of the training do you think challenges trainees the most?
3. Based on your experience, what would you recommend, beyond the standard mandatory training syllabus to improve the OJT success rate?
4. What is the most rewarding part of training student controllers?



Here are their answers:

UNITED ATS

1. Applying Competency-based Training (CBT) enhances training effectiveness and efficiency, helping to meet objectives and shorten on-the-job training (OJT) periods. CBT focuses on developing participants' skills and capacities. Utilising the client's network, regulation updates, and airspace configurations in simulations improves training validity and consistency, ultimately allowing for a potential restructuring or reduction in OJT duration.
2. The most challenging part of ATCO training at United ATS is the advanced phase of procedural and surveillance (RADAR Simulation). During this stage, trainees manage the maximum number of flights while dealing with abnormal situations like RCF, hijacked



aircraft, fuel shortages, engine failures, and radar malfunctions. Instructors also face challenges in developing trainees' skills for this intense environment.

3. United ATS recommends developing the assessment and evaluation system and procedures during the training program and taking corrective action to cover the evaluation notes and results step by step, in addition to making the practical training and simulation rules applied, where possible, to the airfield and airspace configurations in which participants will work in after graduation. This, in addition to the standard mandatory training syllabus, will improve the OJT success rate and period. Also, providing digital course material for participants' reference at any time, which also facilitates the regular modification and update of course contents.

4. The most rewarding part of training student controllers is the final practical exam, where they handle a realistic traffic scenario. This helps students become familiar with the simulator and the configuration of real airspace, including bottlenecks and restricted areas. As students reach a professional level in simulator training, the duration of on-the-job training (OJT) can be shortened, leading to reduced costs. ◀

FTE JEREZ

1. To improve the training of air traffic controllers, both initial training and unit training, it would be very convenient to integrate AI more extensively. This includes its use by controllers as well as its incorporation into the operation of the simulators used for their training.
2. Students on initial air traffic controller courses encounter their greatest challenges in the practical phases, and more specifically during the initial phases of these exercises in some of the ratings, when they have to get used to performing many tasks at the same time, such as using correct phraseology and writing on cards or managing the bay (conventional or electronic), observing traffic, planning and executing tasks and planning for conflicts that may arise.
3. The use of Virtual Reality (VR) and Augmented Reality (AR)-based training could help improve situational awareness and decision-making. Furthermore, assigning experienced supervisors as mentors to recruits can instill confidence and enhance goal achievement.
4. From the perspective of initial training prior to on-the-job training, the most rewarding part of new air traffic controllers is watching their progress from beginners to skilled professionals who can handle complex situations with enough confidence to tackle

unit training. It's especially satisfying to see the moment when a trainee has a "lightbulb moment"—finally grasping and fluently applying difficult concepts. From that point on, they begin to anticipate problems and make decisions with confidence. ◀

ENTRY POINT NORTH

1. We envision the introduction of a non-biased automatic "instructor" as a groundbreaking innovation in ATCO training. This technical feedback feature, integrated into simulators or other training devices, would provide objective, consistent, and immediate feedback to trainees. By eliminating human biases, this tool ensures that all trainees receive fair and accurate assessments, helping them to identify areas for improvement and track their progress more effectively. Importantly, this innovation would complement the invaluable guidance provided by our instructors, blending technology with personal mentorship to create a balanced and comprehensive training experience.
2. The assessment part of training poses significant challenges for many trainees. Being evaluated by an assessor/instructor can be stressful, as it often involves scrutiny of their performance under pressure. Additionally, self-assessment and self-evaluation on aspects such as stress management, self-confidence and resilience are equally demanding. Trainees must develop the ability to critically analyse their performance, recognise their strengths and weaknesses, and continuously strive for improvement. This dual aspect of assessment—external and internal—requires a high level of self-awareness and emotional intelligence.
3. We recommend a stepwise licensing approach to improve OJT success rates, allowing students to earn licenses incrementally, focusing on one competency at a time. This method fosters self-awareness and confidence. It's also important to incorporate mental health check-ins, stress management workshops, and resilience training in the curriculum to help trainees build psychological strength. This approach ensures ongoing development for staff,

essential for the new generation in the aviation industry.

4. The most rewarding aspect of training student controllers is witnessing their journey of growth and success. Seeing them successfully navigate their education, excel in on-the-job training, and eventually return as instructors eager to mentor the next generation is truly rewarding. It's a privilege to be part of every student's journey and to see them develop into skilled professionals who are passionate about their roles. The personal connections we build and the moments of shared achievement make this work truly meaningful. ◀

GATE AVIATION

1. Since 1990, pilot training has undergone significant advancements in both innovation and methodology. Simulators have increasingly become an integral part of the training process, even extending to the point of airline entry, where simulator-based training now often exceeds actual flight time in aircrafts. However, air traffic control (ATC) training has not progressed at the same pace. The trust in simulator capabilities within ATC remains limited, and few organizations are exploring the full potential of these tools. GATE believes there is considerable opportunity for more unit-specific training to be conducted within a simulator environment, allowing for simulations that closely replicate the unit's ATM system.
2. Analysis has identified a significant gap between ab initio training and pre-on-the-job (pre-OTJ) training due to several factors, including differing training philosophies and approaches misaligned with newer generations' learning styles. This gap is exacerbated by a lack of structured programs and an overemphasis on evaluation over skill development. GATE highlights the main issue as the absence of clear expectations for the education levels students should achieve for each Air Service Navigation Provider (ANSP). This misalignment complicates the transition to advanced training, leading to inconsistencies in preparedness and performance.
3. Many current On-the-Job Training Instructor (OJTI) courses are often delivered in a rushed manner, primarily

as a quick solution for organizational needs, with little investment in the development of instructors to a high standard. There is a critical need for a deeper understanding of training practices, as being an Air Traffic Controller (ATCO) does not inherently make one an effective instructor. For example, it takes only five days to become an ATC instructor, whereas it requires at least ten days to train a skiing instructor, and a minimum of 30 days for a driving instructor.

GATE is exploring innovative approaches to enhance OJTI standards, focusing on how to raise the quality of training. We are investigating whether any other fields are leading the way in instructor development and what lessons we can learn from them. In contrast to how we maintain and update our cars - even when no issues are apparent - ANSPs are not similarly prioritizing the continuous development of their instructors. Just as vehicles integrate new technologies to stay current, it is essential for our instructors to be continuously updated, developed, and aligned with the latest evidence, structures, and methodologies in training. We must evolve beyond outdated practices to meet the expectations and learning styles of new generations.

4. Training student ATCOs is rewarding and impactful, ensuring air traffic safety and efficiency. As trainers, we shape the next generation of controllers, transferring critical knowledge and skills to navigate complex scenarios and prepare for the dynamic air traffic management environment.

Watching trainees evolve from initial learning to skilled controllers is fulfilling. We influence their decision-making, communication, and operational efficiency. Training aspiring ATCOs shapes the future of air traffic control, ensuring safety, innovation, and responsiveness.

Ultimately, training fosters responsibility, professionalism, and teamwork. As instructors, we empower individuals to take on one of aviation's most critical jobs with skill and confidence. ◀

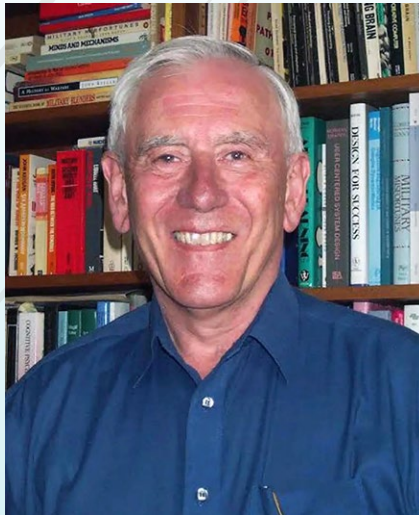
IN MEMORIAM

JAMES T. REASON

1938-2025

On February 5th, 2025, Professor James Reason passed away at the age of 86. A highly respected British psychologist, Reason made significant contributions to the understanding of human error and organizational safety. He is perhaps best known for developing the Swiss cheese model, a powerful and enduring metaphor for explaining how complex systems can fail. This model illustrates how accidents occur when multiple layers of defense—represented as slices of Swiss cheese—each have weaknesses or "holes." When these holes align, they form a pathway through which errors can pass, resulting in system failure. This model has proven invaluable across a range of high-risk industries, including aviation, healthcare, nuclear power, and transportation, and remains one of the most widely referenced frameworks in safety science.

Throughout his career, Reason authored numerous influential works that have become cornerstones in the field of psychology and safety management. His 1990 book *Human Error* provides a detailed psychological analysis of the mechanisms behind human mistakes, distinguishing between slips, lapses,



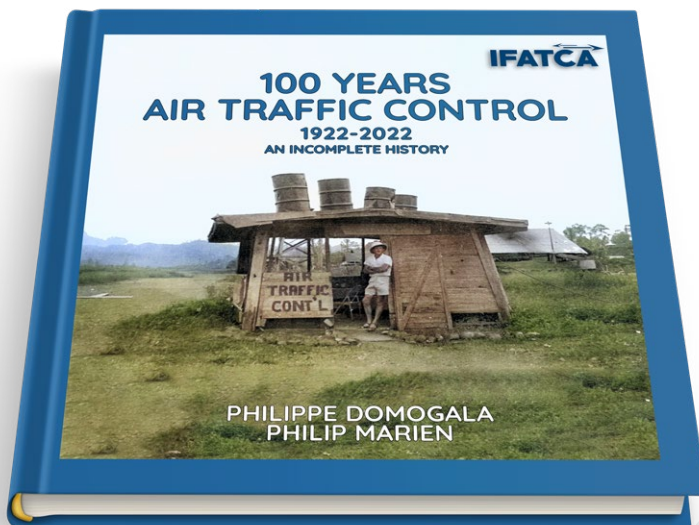
Prof. James Reason
credit: Reason Family

and violations. In *Managing the Risks of Organizational Accidents* (1997), he expanded his focus from individual behavior to the systemic factors that contribute to accidents in complex organizations. These works laid the groundwork for a shift in safety thinking—from blaming individuals to addressing systemic vulnerabilities. His later publications, including *The Human*

Contribution (2008) and *A Life in Error* (2013), continued this exploration, reflecting on the human condition and the inevitability of error in even the most well-designed systems.

Professor Reason's remarkable body of work earned him widespread recognition and numerous honors. In 2003, he was appointed Commander of the Order of the British Empire (CBE) in recognition of his efforts to improve safety in healthcare. He was also elected a Fellow of several prestigious institutions, including the British Academy, the British Psychological Society, the Royal Aeronautical Society, and the Royal College of General Practitioners. In 2011, he was made an honorary fellow of the Safety and Reliability Society, further acknowledging his lifelong contributions to safety science.

Professor Reason died from pneumonia in Slough, England. His legacy continues to shape how we understand, manage, and mitigate human error. His insights have had a profound and lasting influence on safety practices around the world, especially in sectors where error can have catastrophic consequences. ◀



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UGLY AIRCRAFT PART DEUX

A few issues ago, we launched a quest for the weirdest/ugliest aircraft ever designed. We would like to say that the response from our readers was overwhelming, but that would be fake news. So we, at Charlie HQ, went looking for ourselves and were thrilled to come across the Fairey Rotodyne! It may look like it was designed by a Soviet-era, vodka-fueled committee – right up to the Aeroflot colour scheme – but it was a 1950s British design.

The Rotodyne featured a tip-jet-powered rotor(yes, you read that correctly: the rotor had little jet engines at its tips!) that burned a mixture of fuel and compressed air bled from two wing-mounted Napier Eland turboprops. The rotor was driven for vertical take-offs, landings and hovering, as well as low-speed translational flight, but autorotated during cruise flight with all engine power applied to two propellers. Only one prototype was built, and although was promising in concept and successful in trials, the programme was eventually cancelled in 1962. With the chief aim of shuttling passengers between city centres, the aircraft generated too much noise. As one of the test pilots put it: *"From two miles away, it would stop a conversation. [...] the noise of those little jets on the tips of the rotor was just indescribable."*



credit: J Thinesen, SFF photo archive

CONFIDENCE BOOSTER



credit: via reddit.com

THE CONTROLLER



credit: via the internet

MORE WHEELS PLEASE

It seems that Air Arabia has managed to negotiate an additional wheel on its A320 fleet. According to the safety card, this wheel is located on the rear part of the main fuselage and possibly only pops out during emergencies. In that case, we have to assume that the emergency landing checklist calls for **"Four Greens"**?

DUMB REASONS TO DIVERT PART XXIV

At the end of March, a United Airlines flight that had left Los Angeles bound for China had to divert after one of the pilots realised they had forgotten their passport. Two hours into the flight, the aircraft turned around and diverted to San Francisco. While the passengers were reportedly given meal vouchers and "compensation", it is not clear what happened next: did someone bring the pilot's passport from Los Angeles to San Francisco? Did the pilot get detained by Immigration and sent to a tropical detention centre for trying to enter the USA without a valid passport? Did United add an item to the pre-take-off checklist like **"PILOT PASSPORTS CHECKED"**?



credit: Boarding Now via yayimages.com

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