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# ECACNEWS

European Civil Aviation Conference Magazine

#77

Aviation security:  
challenges today, and  
solutions for the future

Capacity-building  
programmes in Europe  
and around the world

Aviation security  
technology: supporting  
future resilience

ECAC Spotlight on the  
Guidance Material  
Task Force

## SECURING OUR SKIES: the continuing and changing importance of aviation security



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### ECACNEWS

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In this edition of ECAC News, we delve into the ever-important topic of aviation security. With aviation now well along the route to recovery from the COVID-related crisis, effective and efficiently applied security measures will be an important part of enabling the continued and sustainable regrowth of the sector.

The articles included in this magazine cover topics that are particularly relevant to this issue, from the latest developments in aviation security technology, to the challenges faced by security personnel and the importance of training and human factors.

We explore how aviation security could change in the near future, with a focus on new technologies and innovations that are being developed to keep passengers and crew safe, including the open architecture in airport security equipment and the roadmap to the ECAC Common Evaluation Process (CEP) of security equipment. We also take a closer look at specific security issues, such as lapses in certification and re-certification, as well as the challenges in staffing and skills, which could hamper the recovery of aviation if not addressed effectively.

In addition to discussing the latest developments in aviation security, we also take a closer look at best practices in designing and delivering capacity-building activities, and also learn from the experiences of different countries around the world, such as Cyprus, Rwanda and the United Arab Emirates.

We also examine the main outcomes of the 41<sup>st</sup> ICAO Assembly on aviation security and facilitation, and discuss the EU-funded and ECAC-implemented CASE II Project and its multilateral capacity-building activities addressed to Partner States in Africa, the Middle East and Asia, aimed at improving the level of effective implementation of security measures on the ground through technical support on-site.

Finally, I would like to thank all the contributors to this edition of ECAC News, and I invite you to discover the interesting topics being addressed here. I hope that the insights and information shared will increase awareness and understanding of the importance of aviation security and inspire readers to take an active role in keeping our skies secure for all. ●



**GUNNAR LJUNGBERG**

ECAC Focal Point for Security, and  
Civil Aviation and Maritime Director of the  
Swedish Transport Agency

“  
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sector.”



## **Aviation security:** challenges today, and solutions for the future





## It's time for a change

**“B**eware of false knowledge, it is more dangerous than ignorance” was the advice of George Bernard Shaw, a renowned Irish playwright, advice I consider pertinent today. In a world where there is access to information on an unprecedented scale, where technology is so advanced that for certain tasks it can replace people, and where societal values have transformed attitudes and indeed regimes globally, the words of this playwright are a sobering reminder of our responsibility, particularly in aviation security.

Aviation security has had to evolve in response to acts of unlawful interference and acts of terrorism that have killed many over the years. So too has regulation evolved as a response, with the introduction of walk-through metal detection to counter hijackers using metal weapons, and screening to counter improvised explosive devices being concealed in cabin and hold baggage. The evolution is often represented as “reactive”, too little, too late. It is also slow – a commitment at European level to screen hold baggage as a result of a terrorist attack in 1988, took more than a decade in many States to become a regulatory requirement.

The ICAO Threat and Risk Context Statement is a valuable insight for its users, a global gauge to contribute to within national threat and risk assessment processes. It gives a global perspective and over time has shown the increasing sophistication as well as risk vectors that States, regulators and industry have to consider and mitigate. This is unlikely to change as the threat to civil aviation remains.

Aviation security relies on three pillars: people, process and equipment. Aviation security experts largely agree that we will always need people to achieve effective aviation security; despite the human factors that can beset our performance, we can process and respond in a live environment, in ways that a machine cannot. Conversely, experts also agree that increased reliance on equipment with better detection capability is the appropriate path. We also know that aviation security is best achieved by design, with layers and a combination of measures set down in documented processes that ensure prohibited articles and unauthorised persons are not present in security-restricted areas of airports or on aircraft. We measure these pillars through certification of personnel, equipment performance evaluation, compliance monitoring, testing, and within the wider economic reality of costs, profitability and value for money.

So why would there be a concern about false knowledge? Are we ignorant about the aviation security regime?

It's my view that change is needed because there are elements of our system that are not put effectively to good use. As Nelson Mandela put it, “Times change, and we need to change as well.”

We have significant amounts of information, but how we measure, benchmark, compare and share that information is where there is room for improvement and change. Reliable evidence-based and risk-informed decision making is not only an objective, it is the only way to work together effectively.

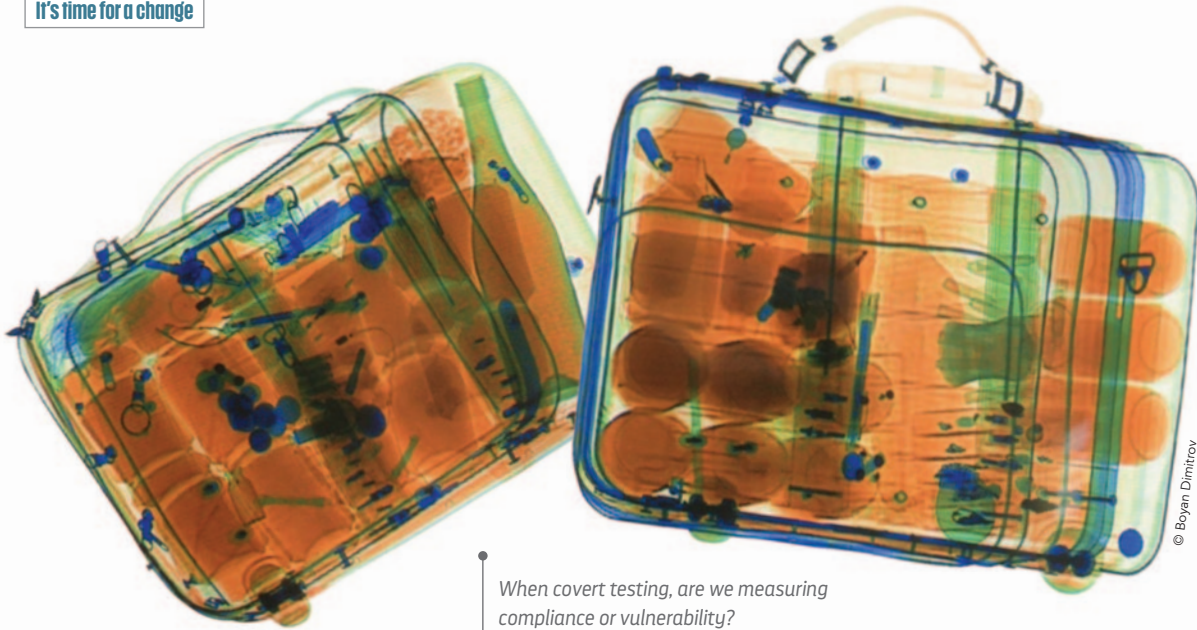


**ELEANOR TRAVERS**

Aviation Security Manager,  
Irish Aviation Authority

**“ Beware of  
false knowledge,  
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GEORGE BERNARD SHAW



When covert testing, are we measuring compliance or vulnerability?

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Those readers familiar with aviation security regulation will know that information sharing is a key element enshrined in ICAO standards, ECAC policy recommendations, as well as national and international law. When we think of security intelligence, for example, in the case of a specific threat, we expect that the police and appropriate authorities the world over have a means of sharing that information with each other.

However, when it comes to system performance this information is not shared uniformly, and I question whether globally it is *measured* uniformly. In effect, if a State or airport puts in a measure that results in a significant improvement in detection or otherwise, we would like them to volunteer that information in order to (a) know it exists, (b) share it with others, and (c) provide the learning opportunity that improves the system overall. Don't we all have the same objective? We expect intelligence to be shared but what might the system look like if we could expect that routine performance information is shared? If we do not share how and what we measure, comparison is difficult if not impossible and learning opportunities are limited.

For automatic explosive detection systems equipment, we know, from the lists of equipment meeting national and international detection standards, that there are a limited number of manufacturers. For example, does one airport have better performing equipment than another when it is the same manufacturer and model? What is an appropriate measure for their operational performance? Are we measuring it and if yes, are we sharing this information not only at the State level but on a regional level? We know that security detection equipment is specialised, but not all States have the same capability in terms of testing and validating equipment. Thus, we rely heavily on sharing this information before it appears on “lists”. Why does that information sharing stop once equipment is in operation?

To take a process example, I look to risk assessment (threat assessment is not included in this example, being the purview of police and intelligence services for the most part). Risk assessment is the role of an appropriate authority and is the way the modern aviation industry conducts business in both safety and security management systems. Risk assessment starts with the identification of the risk or hazard. It elaborates methods of attack. At this stage, this information should be largely common to all, nuanced perhaps by some local factors. The next stage is the evaluation of the mitigation, much of which is common – same access control, same screening. Again, there should be no reason this cannot be shared and compared. Then we look to effectiveness of the mitigation or vulnerability and here is where I see a gap in our knowledge. How do we measure the effectiveness of the mitigation or vulnerability let alone compare it? Are we measuring compliance or vulnerability?

When it comes to risk assessment, often – and rightly so – the information is considered security-sensitive and classified. While that is a legitimate position, it hampers the ability to share information and if there is one thing I know from my experience in aviation security, it is that information is a tradable commodity. And then we get to risk appetite, which will be different as States experience different levels of threat. However, this is not shared or compared. Why is that? Perhaps this limitation is understandable in terms of public communication, but why is it also true amongst aviation security policymakers and experts?

I contend that we need to devalue the informal networks through which information is traded and establish formal mechanisms at the system level, where information becomes knowledge, and where knowledge becomes wisdom giving real insights to system performance.



## We need to establish formal mechanisms at the system level, where information becomes knowledge, and where knowledge becomes wisdom giving real insights to system performance.

What might that look like? To use an example, many States grant exemptions from screening in certain circumstances, often on the basis of a policy decision rather than a process. ECAC has guidance for a risk-based process that can be used by its Member States. Taking that ECAC guidance, it would be possible to compare the criteria used by a number of Member States to determine which criteria are more important, which criteria can be removed, which criteria result in differences between States, none of which is possible to know today. Sharing and discussing these criteria increases confidence that we have similar approaches and use standardised internationally recognised processes, and gives flexibility and tolerances within the risk assessment framework.

Another example is covert testing used to determine the effectiveness of processes in place at airports and on aircraft. A number of regulators, including the Irish Aviation Authority, are using covert testing to also measure vulnerability. You may ask what the difference is given that the test process is identical. We know that security is not 100% – any individual measure can be defeated. So we layer the measures, consolidate them in the design and implementation. What percentage performance results? Is that consolidated approach achieving 100%?

It is important that we do not confuse compliance and security – they are not the same. Compliance data can be a source of “false knowledge” – thinking that the system is so compliant it cannot be vulnerable to attack. Hence using a standardised, repeatable and reliable methodology to test vulnerability and sharing the results between the participating States, we have learned simple steps and identified operational best practices from each other that improve detection, and at no additional cost to the operators. We can measure the vulnerability more accurately and use that information to reinforce and improve the mitigation measures.

To quote a Guinean proverb, “Knowledge without wisdom is like water in the sand.” To become wise, we need to use our knowledge and information in a new way, promoting the learning opportunities and bringing a new energy and insight into the aviation security system to identify what is working, and what's not. Where our people, process and equipment are the same, have we the same performance and effectiveness? How can our system improve, ideally through working smarter and at a lower cost?

Albert Einstein considered that the true sign of intelligence is not knowledge but imagination. If indeed imagination is the measure of our intelligent aviation security system, what do we use to measure it? Our ECAC community, through its aviation security task forces and forum, can work together to ensure future decisions and developments are inspired by imagination and based on reliable, aggregated evidence. More immediately though, we need to prioritise the conversation and process that will bring us there.

I want to see a regime that is constantly striving to be better for the travelling public, that knows its strengths and weaknesses as a system, and not one focused only on its own part. I believe it is time to change our thinking, to engage our collective imagination, to invest in reliable information to progress advancements, and it is time to share meaningfully the criteria and performance data that transforms the system in a wise and considered way. Will you join us and make the change? ●

**Eleanor Travers** leads the Aviation Security Division in the Irish Aviation Authority, which is the appropriate authority in Ireland for the purposes of EC Regulation 300/2008.

Eleanor has worked in aviation throughout her career, initially in airport operations and latterly in aviation security. She worked at international level with ECAC in Paris before returning to Dublin to work for the authority. The authority's Aviation Security Division is responsible for processing approvals, conducting compliance monitoring, certifying personnel and coordinating aviation security matters with more than 400 regulated entities.

She is currently chair of ECAC's Guidance Material Task Force and is committed to promoting information and experience exchanges that improve the effectiveness of the national and global aviation security system.



# Current challenges and future development of aviation security – a perspective from Rwanda



**SILAS UDAHEUREKA**

Director General of the Rwanda Civil Aviation Authority, and Bureau President of the African Civil Aviation Commission (AFCAC)

## Background

Rwanda has recognised air transport as one of the flagships for the country's development as part of its National Strategy for Transformation. In recent years, Rwanda's aviation industry has grown in leaps and bounds with the desire to achieve effective accessibility/connectivity into and out of Rwanda, to and from the rest of the world, in line with Rwanda's economic growth imperatives.

As a way of facilitating this growth, it was necessary to improve Rwanda's aviation security and safety in order to achieve international standards certification in safety, security and quality of operations. These certifications – beyond safety standards – allow Rwandan-registered air carriers to easily obtain approvals and authorisations to access different destinations, but also to be a member of the International Air Transport Association (IATA), which in turn increases passenger numbers through partnerships with other airlines and organisations globally.

## One-stop security

Rwanda intends to increase passenger facilitation while ensuring their security by establishing one-stop security (OSS). One-stop security is a security concept where transfer passengers and/or hold baggage are not rescreened at transfer airports if they were adequately screened at the airport of ori-

gin. It is the acceptance and formal approval by a State that security measures carried out in another State are at least equivalent, in terms of the security outcome, to its own security measures. Such approval may be in respect of one, multiple or all security measures based on risk assessment. One-stop security will be established with the benefits in mind, such as increasing passenger satisfaction by providing a more seamless travel experience, and operational and efficiency improvements for airports and airlines, including increased flight turnaround, among others. The OSS arrangement cannot thrive without international partnership and collaboration. Rwanda plans to conduct a risk assessment to identify States/airports from which more passengers and cargo transit through our airports, so that the OSS arrangement can be established. We are also considering obtaining consent and possible memoranda of understanding with destination airports (downstream validation) so that passengers and cargo can be expeditiously handled without interruptions. We strongly believe that the global nature of aviation security requires that States are cooperative, collaborative and largely dependent on the effectiveness of each other's aviation security systems to provide a common secure aviation environment. Despite enhancements to the security system, terrorists continue to view civil aviation as an attractive target and continue to exploit real or perceived vulnerabilities in the international civil aviation system, with the aim of causing substantial loss of life,





economic damage and disruption to connectivity and trade between States. Cooperation among States in areas of aviation security and safety is of great essence, especially in the physical and cyber domain. This makes all ICAO Contracting States stronger. Nation States/ICAO Contracting States should avoid seeing their own effectiveness and resilience in dealing with aviation security threats as a source of pride and comparative advantage but rather as the potential for actors with ill intentions to exploit the weakest link, and that any successful attack would undermine the global aviation industry as a whole.

### Smart security and internal capacity building

Rwanda has streamlined its equipment and systems procurement process by considering technology assessment to ensure that equipment acquired is of current technology, can be available on the market, and addresses the existing threats to the aviation industry. We put in place security equipment/systems that are effective in screening passengers, their baggage and cargo in an expeditious manner and without unnecessarily inconveniencing passengers to the greatest extent possible. Furthermore, in the security design of the new airports and alterations to existing facilities at international airports, Rwanda ensures that the architectural and infrastructure-related requirements necessary for the optimum implementation of aviation security measures are integrated.

In the course of Rwanda's aviation development journey, the main pillar has been building the internal capacity of our AVSEC and safety oversight personnel, cognizant of the fact that effective security and facilitation cannot be achieved without proper training. Rwanda has embarked on training its operational and oversight personnel in accordance with the requirements of the National Civil Aviation Security Training Program and Rwanda Civil Aviation Regulations (RCARS).

**Effective aviation security is anchored on a bedrock of timely intelligence information, tested procedures, appropriate technological infrastructure, and motivated and well-trained security personnel.**



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### Effective oversight performance

The efficiency and effectiveness of aviation security officers is and remains instrumental in improving Rwanda's performance during the ICAO Universal Security Audit Programme - Continuous Monitoring Approach (USAP-CMA), where the ICAO Council President awarded Rwanda for improving its performance from a low score of 67.3% in 2010 to 86% effective implementation of aviation security oversight performance.

These improvements not only led to an increase in the aforementioned score, but were also part and parcel of the activities that led to attaining the requirements for the United States Federal Aviation Administration's (FAA) International Aviation Safety Assessment (IASA) Category 1 status following a thorough review of our progress in improving safety oversight processes. Safety oversight assessments are conducted back-to-back with the aviation security operations and oversight. The registered achievements are to a great extent due to the abundance of political will from our government and partly as a result of our partnerships with international organisations such as ECAC, which has assisted in providing workshops and training focused on Best Practices for National Auditors (BPNA1) under the EU-funded and ECAC-implemented CASE Project in 2019, and the extended testing and certification of security equipment conducted in 2022 under the subsequent CASE II Project. This is expected to propel Rwanda to new heights in implementing international Standards and Recommended Practices (SARPs).



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#### Silas Udaheureka

is Bureau president of the African Civil Aviation Commission and a member of the board of directors of the East African Community – Civil Aviation Safety and Security Oversight Agency, which is a Regional Safety Oversight Organisation (RSOO). He currently serves as the director general of the Rwanda Civil Aviation Authority. Before being appointed to the position of director general in 2014, Mr Udaheureka deputised the director general in the same organisation and was responsible for airports management and operations, a position he served in for seven years. He joined the Civil Aviation Authority in January 2007.

### Resilience against aviation threats

The aviation industry must recognise the changed threat spectrum where cyber threats and insider threat stand out prominently and as some of the most elusive – harder to detect and prevent than traditional external threats. For example, a cheap wireless hardware will expose aeronautical communications systems to a wide range of threats. We should appreciate and support ICAO's initiative in establishing and forming a study group on cyber security, and many other regulators who have already developed or are now working on cyber security-relevant regulations, such as EASA.

To ensure effective continuity and sustained civil aviation operations, it is imperative to manage evolving threats such as cyber security, which necessitates adopting cyber security measures and procedures. Rwanda has instituted cyber security measures, such as an awareness campaign that is conducted through our National Cyber Security Authority (NCSA) in collaboration with other stakeholders and partners, to educate the staff, operators and the public about cyber security best practices and their rights to personal data protection and privacy.

Rwanda civil aviation also, through the director general's directives, requires all air services operators to identify their critical information and data to be protected, put in place measures for their protection and – should the need arise for their disposal – put in place measures for secure disposal. Such measures are subjected to oversight to ensure that effective implementation is realised.

The Rwandan aviation industry's resilience against cyber security is based on three principles: ensuring confidentiality of data and information by preventing unauthorised disclosure of systems and information; preventing the unauthorised modifi-

cation of systems and information to alter the desired dissemination of information; and ensuring the availability of relevant information by preventing disruption of services and productivity.

### Conclusion

There is a need to provide unique insights into means to enhance the resilience of aviation security operations moving forward, including through illustrating ways to foster innovation that is efficient and effective, from the human, operational innovations and financial perspectives.

As the aviation sector becomes digitised and increasingly reliant on automation and therefore becoming attractive to cyber attacks by both nation-State actors and terrorists, it is imperative that cyber security protection mechanisms for aviation communication technologies be considered as a requirement in the course of their design or specification document and development.

Most often, civil aviation authorities and the industry at large focus their efforts on mere compliance with existing ICAO SARPs, Annexes to the Chicago Convention and national regulations that normally take a long time to evolve, rather than accompanying this compliance while continuously looking to the future to anticipate those vulnerabilities and potential threats that could diminish and undermine our required preparedness.

As civil aviation is so critical to the functioning of global economies, both in developed and developing countries, and as aviation-related safety and security incidents have such an enormous impact on the media, especially with new technologies that enable rapid spread of information and misinformation, it is likely to remain an attractive target for attackers who want to cause maximum disruption. ●

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# Challenges in staffing, and skills issues in aviation

## The problem

The aviation market was hit particularly hard by the pandemic, resulting in huge losses for almost all operators and related entities (airports, air carriers, handling agents, security companies, etc.) over the last two years. Consequently, the industry had to lay off a huge portion of its staff. Government aid helped them cope with those losses. When conditions quickly returned to “normal” following the lifting of most travel restrictions, the aviation industry did not follow, and it was simply left short-staffed both on the ground and in the air.

## Reasons for the problem

Layoffs of a noteworthy number of competent staff were a major part of the crisis, but they weren’t the only factor. Other reasons fueled the crisis, and it would be beneficial to identify them and try to find ways of solving the problem – or at least minimising its impact.

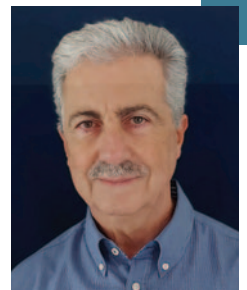
The pandemic’s effects on operations and the resulting travel restrictions imposed by all States resulted in job cuts. Because of decisions taken by most operators and entities during the pandemic, people lost faith in the aviation sector. They simply don’t want to come back to work in aviation. They found jobs in other sectors with better wages and working conditions and less stressful, and they are not willing to return to what they had before. The

tourism industry turned its attention to personnel employed previously in the aviation sector because they were qualified (better trained in customer service and possessing certifications).

The aviation sector and associated jobs are not so attractive anymore. This, of course, was the case before the pandemic – but it was exacerbated following that. People began to look for something better in terms of their career prospects and their way of life. They changed the way they perceived employment; a new generation of workers is thinking far differently than the previous generation 20 years ago.

The system was mainly based on temporary/seasonal jobs; a lot of people were not dedicated aviation industry workers but were employed in the sector for some extra money. This affected mainly holiday destinations in countries that base their economy on tourism. The quality of staff and aviation-oriented personnel may have been an issue in the past, but it has now become more important than ever.

Operators and entities knew recovery was on the way but they were unable to plan ahead, mainly due to insufficient data. As a result, it was simply impossible to project developments. Recovery from the pandemic and the lifting of travel restrictions were very swift, faster than industry could predict and cope with.



**CHARALAMBOS SOUROULLAS**

Former Head of Aviation Security,  
Department of Civil Aviation,  
Cyprus





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**“  
If all involved  
work together,  
operators and  
entities will be able  
to satisfactorily  
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disruption to  
operations.  
We owe that to  
our customers: the  
passengers!”**

New regulations entered into force on 31 December 2021 that mandated enhanced background checks for all staff before they gained access to security-restricted airport areas. These security checks required the additional gathering of any intelligence or other information that national authorities might consider relevant to the suitability of a prospective employee. The involvement of several national/foreign authorities resulted in a process that was too slow, and it could take from 30 days (for nationals) to 60 days (for European citizens) – or even more – to be completed.

This was also exacerbated by the inclusion of a new regulation requiring screeners and persons performing access control, surveillance and patrols at airports not to be trained until completion of the enhanced background check. These delays made many people seek employment elsewhere because they would simply not wait until they were security-cleared, trained and then undergo additional on-the-job training and certification *before* they were given a contract. It was simply too long!

The percentage of non-nationals undergoing enhanced background checks caused more delays in obtaining security clearances because national authorities needed to contact foreign government authorities for information.

Complexity of regulations – it is difficult for anyone, especially a screener, to reach a satisfactory level of information in a short period of time in order to be able to implement satisfactorily the required standards. Qualified personnel with skills and a high level of education turned to other sectors for employment; the aviation sector was left mainly with staff with limited skills, low educational level, and seniors, as they have difficulty finding work in other sectors.

### Possible solutions (short, medium, long term)

The response time for enhanced background checks must definitely be improved. We need to talk to all relevant national authorities, bodies or agencies to reach a satisfactory agreement on what is a reasonable amount of time to screen prospective employees, so that the additional resources required to accelerate the processing times are made available; government support is needed for that.

Enhanced background checks performed by other States on the principle of mutual recognition and based on a Memorandum of Understanding should also be accepted, where possible. The European Commission has already issued information stating that this is accepted provided it is confirmed by the local appropriate authority.

Pending the completion of the enhanced background check, escorting persons could be a partial solution to the problem; the number of persons under supervision (until the enhanced background check is completed) should be limited to those who can be effectively monitored and not be based, for example, on a certain percentage per airport or area of operation.

Operators and entities should try to properly manage flights and traffic and predict, as far as possible, their needs, react early and ensure that the details of new employees are submitted to authorities as early as possible.

Staff should be willing to work flexible hours and accept to work overtime when needed. Operators and entities should also seek to move staff from one airport to another, based on actual needs and hours of operation, where possible.

Training before completion of enhanced background checks for several categories of staff once they have undergone the standard background check. They could then possibly perform their on-the-job training under supervision. This, however, does not apply to screeners and those performing access control, surveillance, and patrols at the airports; once they undergo their standard background check, they could attend training including only information that is available publicly, until the enhanced background check is completed.

Another possible solution is to allow those screeners waiting for enhanced background checks to be completed to work in areas where airport identification cards are not required, e.g. preparation of passengers, where they can be quickly trained and deployed in front of the screening checkpoints.

The appropriate authority should reconsider the possibility for those operating outside the security-restricted areas to undergo a standard background check, as far as possible, based on national rules and on a risk assessment, in order to ease the work done by the national authorities.

Operators and entities should try to attract quality staff by offering better working conditions, career incentives and rewards for productivity. They should also conduct information campaigns to promote the aviation sector; it is crucial to create a most favourable working environment to attract new talents. They should continue to employ existing staff during low season, even if staff is not really needed. This would allow them to have staff available, ready for work with the appropriate security clearance, when needed. Governments should also be involved, especially in staff retention, by providing financial aid to operators and entities. If staff are made redundant, every effort should be made to ensure they will be back next season.

Good packages to qualified staff who left should be proposed, in order to bring them back: they are qualified, trained and ready for deployment!

Automation and new equipment to enable staff to carry out as little manual work as possible, staff that can be used where they are needed most, should be promoted.

### Risks associated with the proposals

The implementation of some of these proposals may also lead to some weaknesses in the security system.

There should be consideration for potential security threats to aviation posed by issues relating to the recruitment, training and deployment of new aviation staff. In addition, carrying out quick security checks on individuals may lead to mistakes that could potentially be exploited by terrorists. Another risk, given the quality of staff employed nowadays, is whether standards will be satisfactorily implemented.

### Appropriate authorities' and operators' / entities' responsibilities

It is clear that appropriate authorities should be involved and assist operators and entities in managing their operations, as far as possible; working together is the only way to reach the best possible solution to the problem. Monitoring of all operations has to be continuous and intensified by all appropriate authorities, operators and entities to ensure there will be no drawbacks to the implementation of the aforementioned proposals.

One could ask whether the proposed measures will solve the problem of staff shortages. They may or may not, but – in my opinion – they will mitigate the problem. If all involved work together, operators and entities will be able to satisfactorily operate with the minimum disruption to operations.

We owe that to our customers: the passengers! ●

Recently retired head of aviation security, **Charalambos Souroullas**, joined the Department of Civil Aviation in Cyprus in 1988. He served as an airport officer and supervisor at the island nation's two airports, responsible, among others, for ground support equipment and operation/safety training. He joined aviation security in 2003 and served as Larnaca Airport security manager, national auditor and head of aviation security. He has a diploma in mechanical engineering from the National Polytechnic School of Athens, a *Diplôme d'Études Approfondies in Mécanique des Fluides* and a *Diplôme de Doctorat in Énergétique* from the *École Centrale des Arts et Manufactures (Paris)*.



“The response time for enhanced background checks must definitely be improved.”



# Security and facilitation outcomes of the 41<sup>st</sup> ICAO Assembly

Every triennial session of the International Civil Aviation Organization (ICAO) Assembly is a key time for international aviation and all its stakeholders. The 41<sup>st</sup> Session of the ICAO Assembly was held between 27 September and 7 October 2022 and reunited more than 2500 delegates from 184 Member States and 57 Observer delegations. Two and a half years after the beginning of the COVID-19 pandemic, the organisation of this hybrid event in the midst of the recovery of air transport was significant for many stakeholders, and ICAO was ready for this critical Assembly and the discussions that took place. The international situation in 2022, in particular the climate emergency, added to the importance of the meeting for all States and organisations participating in the discussions. With so much at stake, the 41<sup>st</sup> ICAO Assembly could not be anything but impactful.

**T**his Assembly was clear on the significance of aviation security and cyber security, based on feedback resulting from the pandemic and the challenges of resuming traffic to enable a secure and sustainable recovery of air transport.

Member States continued to share their experiences in the numerous Assembly papers they submitted and their interventions during the various sessions to exchange on the strategic directions for the work of the organisation for the next triennium.

By the large number of papers submitted, this 41<sup>st</sup> ICAO Assembly was a clear reminder that ICAO Strategic Objective *Security and Facilitation* is a priority for States.

One of the main messages highlighted during this Assembly remains that the Strategic Objective *Security and Facilitation* is an enabler of the sustainable recovery of traffic.

More than 40 working papers pertaining to ICAO facilitation programmes were submitted. Following discussions and recommendations by the Executive Committee, the Assembly adopted two revised resolutions, one on the “consolidated statement on the continuing ICAO policies related to facilitation”, and one on “Assistance to aviation accident victims and their families”. Two new resolutions were also adopted, the first being the “Declaration on air transport facilitation”, affirming global commitment to enable the safe and efficient recovery of aviation from the COVID-19 pandemic, and to make aviation

more resilient in the future. This resolution takes into account key recommendations stemming from the Facilitation Stream of the 2021 High-level Conference on COVID-19. The second new resolution addresses “Accessibility in aviation”, a growing subject on facilitating the transport of persons with disabilities.

The Assembly also adopted the priorities and expected outcomes for the 2023-2025 triennium for the facilitation programmes related to Annex 9 – *Facilitation*, the ICAO TRIP Strategy and the ICAO Public Key Directory. Notably, support of the implementation of interoperable health certificates with the Visible Digital Seal for Non-Constrained Environments (VDS-NC) and the inclusion of associated public key certificates in the ICAO Health Master List.

With regard to aviation security and considering the current and foreseen global threat picture, the Assembly reaffirmed the necessity to mitigate security risks posed to civil aviation globally. To be more effective, States have decided to continue their ongoing efforts regarding the notification and analysis of security occurrences and incidents, the strengthening of risk assessment and management methodologies, and the reinforcement of cooperation within and between States and with other key stakeholders.

The Assembly also took note of the lessons learned from the pandemic to consolidate security systems. We all need to ensure the aviation workforce



**SYLVAIN LEFOYER**

Deputy Director, Aviation Security and Facilitation, Air Transport Bureau, International Civil Aviation Organization (ICAO)



is competent, motivated, and well-trained to increase the efficiency of aviation security measures implemented and *in fine* to mitigate risks posed to civil aviation. Robust and adapted training should be implemented, as well as a strong, positive security culture. This work has progressed as a result of the shared achievements of the ICAO *Year of Security Culture* (YOSC) that took place in 2021 but will require a continued strategic approach to human factors and practical actions to promote security awareness and optimal security behaviour by all entities and individuals at all levels.

Naturally, all these priorities will be reflected in the next revision of the Global Aviation Security Plan (GASeP), without forgetting the evolution of aviation security oversight, and innovation in aviation security technologies and processes. All proposals made by States and participants at the Assembly, including those on security goals and targets, as well as concrete and measurable indicators, will be analysed and taken into account by the ICAO Secretariat and the expert group in charge of preparing the revision of the global plan. This Assembly was essential to ensure the broader consultation with all stakeholders, which will allow ICAO to define global and shared strategic priorities in aviation security.

With regard to aviation cyber security, the past two triennia were all about recognising the importance of addressing cyber threats against civil aviation through two successive Assembly resolutions and the adoption of the first Aviation Cybersecurity Strategy underpinning ICAO's vision for the global aviation sector to be resilient to cyber attacks, safe and secure, while continuing to innovate and grow. In addition, ICAO further continued to urge States to adopt and implement the Beijing Convention 2010 (Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation) and the Beijing Protocol 2010 (Protocol Supplementary to the Convention for the Suppression of Unlawful Seizure of Aircraft) as means for deterrence by criminalising cyber attacks against civil aviation, and for prosecuting offenders.

The Assembly acknowledged the start of the technical work and the development of the ICAO Cybersecurity Action Plan, which provides the foundation for ICAO, States and stakeholders to work together and proposes a series of principles,

“By the large number of papers submitted, this 41<sup>st</sup> ICAO Assembly was a clear reminder that ICAO Strategic Objective Security and Facilitation is a priority for States.”

measures and actions to achieve the objectives of the Aviation Cybersecurity Strategy's seven pillars.

The Assembly reaffirmed that the upcoming 2023-2025 triennium will be devoted to implementing technical work founded on the new governance structure for cyber security in ICAO. This structure is based on two panels of experts: the Cybersecurity Panel reporting to the Council's Aviation Security Committee, and the Trust Framework Panel of the Air Navigation Commission, and on the establishment of an ad hoc Cybersecurity Coordination Committee under the ICAO Council to coordinate all initiatives related to aviation cyber security in ICAO. The new governance structure aims to ensure the convergence of all aviation cyber security initiatives undertaken by the different expert groups in ICAO into a unified aviation cyber security work programme, hence enhancing the accountability, transparency, efficiency and coordination of ICAO's work on these topics.

Digital transformation brings a lot of benefits, but also vulnerabilities and an increased exposure to cyber attacks. Cyber security is an area where States have to invest, starting by developing a strong and sustainable cyber security culture.

Many proposals were shared by Member States and industry organisations during the Assembly, and all of them will be considered by the newly established Cybersecurity Panel, leading to more in-depth work on the ICAO legal framework and to the publication of more guidance material to further support States and stakeholders to address cyber security in civil aviation and implement their obligations linked to ICAO Standards and Recommended Practices related to aviation cyber security.



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Digital transformation brings a lot of benefits, but also vulnerabilities and an increased exposure to cyber attacks. Cyber security is an area where States have to invest, starting by developing a strong and sustainable cyber security culture.

**Sylvain Lefoyer** has been deputy director, aviation security and facilitation in the Air Transport Bureau of ICAO since 2017. He leads teams in charge of developing policies, Standards and Recommended Practices (SARPs), conducting audits and delivering assistance and capacity building in the areas of aviation security, cyber security, border security, and facilitation.

Before ICAO, Sylvain's career spans 25 years in the French ministry of transports, covering transport safety and security in maritime navigation, ground transportation and air navigation. He holds a master's degree in electronics from Paris University and a master's degree in public management from *École des Ponts ParisTech*.

Answering the needs expressed during this Assembly, the 2023-2025 triennium will see the first ICAO global and coordinated regional outreach activities to promote a coordinated and cross-cutting approach to cyber security in civil aviation.

To protect air transport efficiently and sustainably, during this Assembly States reaffirmed ICAO's global leadership role in aviation security and supported raising the profile of aviation security within the United Nations Global Counter-Terrorism Coordination Compact framework, including through the provision of expertise to assist the Compact, the UN Office of Counter-Terrorism (UNOCT) and the UN Counter-Terrorism Executive Directorate (UNCTED) in the implementation of the United Nations Global Counter-Terrorism Strategy and relevant United Nations Security Council resolutions.

The Assembly also discussed developments relating to the risks posed to civil aviation by conflict zones. In addition to the "Safer Skies Initiative",

several other global and regional initiatives were established to enhance effective airspace risk management. However, considerable work remains to further improve the safety and security of civil aviation operations over or near conflict zones. As such, in 2022 the ICAO Secretariat initiated a review of the *Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones* (Doc 10084).

In conclusion, this ICAO Assembly was rich in exchanges on the current global priorities and on continuing to ensure an effective response to the current and future security threats weighing on an air transport sector in full reconstruction and constant evolution. It was also key to reaffirming Member States' need for civil aviation cyber security, and defining the strategic directions of the global technical framework for cyber security. In this respect, the 41<sup>st</sup> Session of the Assembly was pivotal in allowing the entire global aviation community to define together the future of aviation security and cyber security for civil aviation. ●





## Capacity-building programmes in Europe and around the world



# Best practices in designing and delivering capacity-building activities

The ECAC Aviation Security Capacity-Building Programme (“the Programme”) has been designed to support ECAC Member States in implementing and overseeing aviation security measures, and to further enhance their work in aviation security by sharing best practices, training and tools with them. The activities offered under the Programme aim to provide Member States with advice and technical expertise as well as to further enhance national experts’ knowledge, skills and competencies in key aviation security areas. ECAC’s experience in designing and delivering capacity-building activities will be reviewed in this article.

## Analyse and prioritise

Due to limited resources, we need to prioritise our tasks properly. Continuous analysis of Member States’ needs in capacity building is the basis for defining priorities and implementing the Programme in an effective way. Applying such an approach allows us to identify gaps in capacity building among Member States and focus on the development and delivery of the capacity-building activities that are actually required. The results of the analysis inform the design of capacity-building activities, the development of an annual plan for organising the activities, and contribute to the efficient use of available resources. For example, in 2020 ECAC identified a gap between those Member States with technical expertise relating to security equipment and those Member States that did not have it. Priority was therefore given to developing technical expertise among Member States. As a result, two new interconnected training courses entitled Best Practices for Drafting Technical Specifications for Security Equipment, and CEP Awareness Training were developed and validated by the ECAC Secretariat in 2021.

Current and emerging threats to aviation and current challenges should be considered when defining priorities for developing and conducting capacity-building activities. In this regard, the impact of the COVID-19 pandemic on aviation security and common challenges relating to the recovery from the pandemic and return to normal operations were also carefully analysed and considered by the ECAC Secretariat when developing and delivering capacity-building activities in 2021-2022. Attention was paid to supporting Member States in developing security culture, addressing insider and cyber threats effectively, and using a risk-based approach. High priority was given to improving national auditors’ skills and knowledge in inspecting/auditing the implementation of security measures, and their competencies in conducting covert tests in various domains of aviation security, in order to support Member States in reinforcing their security oversight regimes.

## Adapt and be flexible

Instead of suspending the implementation of the Programme during the pandemic, ECAC adapted it to new circumstances and continued to support Member States. This was mainly done by developing and delivering several new online training courses and webinars. It should be noted that we differentiate between “webinar” and “online training course”.

Best Practices for National Auditors – Cyber Security (basic) was the first online course developed and validated by the ECAC Secretariat in February 2021. Another new online course on Best Practices for Drafting Technical Specifications for Security Equipment was successfully validated in March 2021. Moreover, the content of the existing Basic Aviation Security Training course was updated and adapted to deliver online. These activities are considered as online training courses (not webinars). When delivering these courses, we ensure that all participants are actively involved in the training process. This is achieved by limiting the number of participants in a virtual room (usually up to eight people), ensuring interaction between the instructors and the participants, conducting several virtual activities and discussions, both individual and in sub-groups with the active involvement of all participants.

To support Member States in establishing and improving security culture and addressing the risks of insiders in aviation, more than ten webinars on insider threat and security culture were organised in 2021. When developing the webinars, we tried to think outside the “aviation security box”. As a result, the webinars were open not only to security experts, but to non-security personnel as well, i.e. human resources (HR) managers and specialists from the appropriate authorities and the industry. This contributed to promoting awareness and good practices on how to address insider risks. Moreover, HR specialists acquired an understanding of insiders from a security context, and how they could contribute to insider risk mitigation.



**ARTEM MELNYK**

ECAC Aviation Security  
Capacity-Building Specialist

For the first time, ECAC organised an online workshop on security culture in April 2021. It is worth noting that the virtual workshop comprised several virtual activities and discussions in separate virtual rooms. Such an interaction was very much appreciated by the participants and significantly contributed to achieving the objectives.

Various videoconferencing tools may be used to conduct such activities. Their capabilities and limitations (such as establishing breakout rooms) should be considered when selecting the most appropriate tool. Particular attention should be paid to security features and protection of security-sensitive information. Consideration should also be given to the preparation phase of an online activity, including preparing the training schedule, setting up the training sessions, briefing trainees and accessing the training content. The optimal structure is to deliver only one two-to-three-hour session per day, with a few short breaks.

### Ensure effectiveness

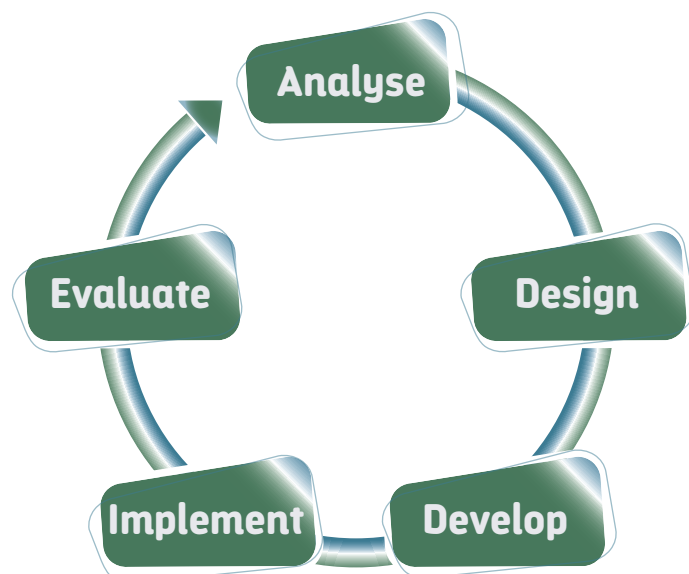
When designing a new capacity-building activity, it is key to ensure that the activity will be effective, i.e. it will produce a necessary effect on the audience. It is therefore important to apply a systematic approach to designing the capacity-building activities. Such an approach should emphasise the importance of clearly defining the learning objectives and performance criteria to measure whether the objectives have been achieved. The approach being applied by the Secretariat contains five phases:

- **Analyse** – The required tasks and competencies, i.e. knowledge, skills and abilities, are determined and learning objectives are formulated. It is important to clearly define a target audience for the activity to ensure that the people participating in a training course or a workshop will be able to apply the acquired knowledge and skills (e.g. national auditors, persons involved in certification of security equipment, risk assessors).
- **Design** – A blueprint for the activity is established, including relevant instructional units (modules) and learning objectives for each module/lesson.
- **Develop** – The blueprint is put into practice: a PowerPoint presentation for each module is prepared together with relevant handouts (if needed). It is crucial that after its validation, the activity will be delivered by various instructors in a consistent way. Therefore, detailed speaking notes are prepared by the Secretariat for each module. As good practice, different training methods are combined, such as theoretical training, group discussions, individual and group table-top activities (for example, review and assessment of various security scenarios) and practical exercises (at an airport, facilities of a regulated agent...). Attention should be paid to the practical aspects of the activity. It is important that the activity deals with practical issues and challenges, activates prior knowledge and

experience of the participants and fosters the integration of new and improved competencies into their previous experience.

- **Implement** – This phase focuses on delivery of the activity. After finalising the material, the Secretariat organises the pilot activity to evaluate it, including the content and quality of the material, classroom and practical activities, pace and timing, etc. Participants' and instructors' feedback is crucial in the validation process. When delivering training courses, both in person and online, the Secretariat limits the number of people in a training room (usually up to eight). This is a factor that contributes to the effectiveness of the training process. It ensures that all participants can be actively involved in the process, including discussions and practical activities. Another good practice is the participation as instructors or moderators of "external" security experts from ECAC Member States with specific expertise in various capacity-building activities. This contributes to sharing of knowledge, experience and best practices among ECAC Member States, as well as to the professional development of these experts.
- **Evaluate** – This phase aims to evaluate the effectiveness of the activity and improve the material, activities and/or instructor's performance, as appropriate. Participants' and instructors' feedback on the activity is one of the key sources of information being used by the Secretariat to evaluate the activity. For that purpose, detailed feedback forms are developed and used to evaluate achievement of the objectives, overall organisation and conduct of the course, quality of the material and activities, as well as the instructors' performance. All feedback forms are carefully analysed by the Secretariat. The results of the analysis serve as a basis for continuous review and improvement of the capacity-building activities.

“  
THE APPROACH  
BEING APPLIED BY  
THE SECRETARIAT  
CONTAINS  
5 PHASES.  
”



Aviation Security  
Basic Training – activity



### Do not forget about efficiency

In addition to focusing on the effectiveness of the activities, we pay attention to the efficiency of the Programme. It is worth noting that efficiency is achievable by carefully considering appropriate approaches that do ensure efficiency of the activities without impacting their quality. Here are some good practices that can increase the efficiency of the capacity-building activities:

- **Effective planning and training material:** ensuring that sufficient time and resources go into the planning process and the development phase can result in an overall saving on the activity during the delivery phase.
- **Focus on practical elements:** this is a key pillar of the ECAC Capacity-Building Programme. Special focus is given to sharing practical best practices and to participants acquiring not only theoretical knowledge but also practical competencies, including abilities to apply the acquired knowledge and skills when performing the assigned tasks.
- **Online activities:** having analysed the results of the activities organised during the pandemic, we revealed that certain capacity-building activities, i.e. those that do not include practical activities and do not require in-person interactions, may be delivered online only, even in the post pandemic period. For example, ECAC Basic Aviation Security Training has been delivered only online since January 2021.
- **“Blended” delivery of activities:** another good practice to consider is the use of the so-called “blended” approach, combining both online and on-site training methods. A good example of the use of this approach is a new ECAC training course on cyber security in aviation. It comprises a three-day theoretical training course delivered by videoconference, and a three-day on-site part focusing on the practical aspects of inspecting/auditing the cyber security measures of an airport operator or an air carrier. ●

**Artem Melnyk** joined the ECAC Secretariat as aviation security capacity-building specialist in November 2020. In this position, he is responsible for developing and implementing the ECAC Aviation Security Audit and Capacity-Building Programmes. He has been working in aviation security since February 2012 starting as a screener at Kyiv Airport and later as a national auditor and head of the Analytical Division, AVSEC Department of the Ukrainian CAA.

Best Practices for  
National Auditors-1 –  
practical activity  
at an airport





# CASE II: Capacity building during the COVID crisis

Capacity building has long been an important part of ECAC's aviation security work. Since 2004, a capacity-building programme for the benefit of ECAC's own Member States has been in place, and this programme has developed to meet the changing circumstances, whether developments in threat or greater stringency of aviation security obligations, whether in Europe or at a global level.

**T**his work took an outward turn in November 2015 when the Civil Aviation Security in Africa and the Arabian Peninsula (CASE) Project was launched. This programme, funded by the European Union and implemented by a special project team established in ECAC, meant that ECAC was now delivering capacity building outside the European region, reflecting the need to enable as many States as possible to respond effectively to increasingly rapid developments in the threat and the measures required to address it.

Following the success of the CASE Project, which delivered on-site activities in 38 Partner States and enabled the participation of 21 more States in regional workshops, the successor project, Civil Aviation Security in Africa, the Middle East and Asia (CASE II), was launched in 2020.

The intention was that CASE II would draw on the lessons learned from its predecessor project: it would focus on State-to-State on-site capacity-building activities, which has been found to be the most effective type of activity; it would take a more organised approach to the planning and monitoring of activities in individual Partner States, based on agreed plans of action; it would expand its geographical scope to the rest of Asia; and it would carry out certain partnership activities with industry bodies.

**As the sector went into an all-encompassing crisis, an immediate rethink was needed.**

In this context, there was expected to be a high degree of continuity between the two projects. The first CASE project had generated a good deal of knowledge about Partner States' needs, and in many cases there were activities planned for the early stages of CASE II that would follow naturally from the improvements already made in the first project.

The reality turned out to be somewhat different. Among the many dramatic effects of the COVID-19 pandemic, the near impossibility of conducting State-to-State on-site activities, combined with the diversion of resources within aviation authorities as the sector went into an all-encompassing crisis, meant that an immediate rethink was needed. The first CASE project was brought to an end slightly earlier than planned, with three activities having to be abandoned. And CASE II, launched with a kick-off meeting in October 2020, reassessed its delivery plans in the face of unprecedented disruption and uncertainty.



**MARK RODMELL**

Deputy Executive Secretary,  
European Civil Aviation  
Conference, and CASE II  
Project Director



## We hope this experience will provide lessons that will have importance for other capacity-building programmes across aviation domains.

“Some of the problems created by the pandemic were irreversible, and could not be dealt with simply by a return to old ways.”

**Mark Rodmell** joined ECAC in December 2020 as the deputy executive secretary. In this role, he manages and oversees the efficient and effective delivery of the ECAC work programme in all domains of activity of the organisation. He prepares policy advice and strategic options for the executive secretary and for senior level meetings, and promotes ECAC activity in international forums. He also acts as the project director for the CASE II Project.

The first thing CASE II did was to adapt its approach to delivery to meet the circumstances. Recruitment of the project team was slowed down, there being no purpose to recruiting experts to travel across the world delivering training activities when travel was in effect impossible. A number of activities were developed specifically to be delivered online, with some new thinking about what could and could not be achieved in the face of travel restrictions, and how best to harness the improvements in videoconferencing platforms that became available as working methods everywhere changed in the face of the pandemic.

The project learned a number of things from this experience. Some foundational training activities were quite suitable for online delivery, as they consisted of giving a theoretical grounding that could be delivered almost as well in the virtual classroom as in person. Online activities could be organised quickly and at low cost, with no physical limit to the numbers of participants. Large regional workshops could be organised online, with simultaneous breakout sessions and interpretation into multiple languages, using technology that was now available to all.

However, this approach had its limitations. To take an example: in delivering capacity building on landside security, modules on the essential concepts and theoretical approaches to risk assessment could indeed be delivered online. But given the different physical environments in airports around the world, on-site work was still needed to turn this theoretical grounding into practical skills. The difficulties experienced by people in all areas of business in maintaining focus and effectiveness in long online meetings were amplified in trying to deliver outcome-based training in virtual settings.

There were some benefits from the experience. New approaches to combining online and on-site activity were taken in delivery of activities related to, for instance, covert and overt testing, and it is hoped that these will enable more flexible and lower-cost means of delivering capacity building in the future. But the resumption of travel, and the ability to deliver activities in the way originally planned, provided a great sense of relief to the project as it geared itself up to another set of changes to its working methods.

Some of the problems created by the pandemic were irreversible, and could not be dealt with simply by a return to old ways. Levels of activity had remained low in the face of uncertainty and false dawns, and continuity with the activities of the first CASE project had been lost in many cases, either through the passage of time or as a result of personnel being transferred to other duties to deal with the consequences of the pandemic. There was not the slightest possibility of the project being able to deliver the scale of activities originally planned: not simply because of the time already lost, but because the fear of disruption through resumption of travel restrictions led to a cautious approach among some in committing to activities. In particular, the persistence of travel restrictions on routes in the Asia-Pacific region creates continuing practical issues.

The project aims to rise to this challenge. It has a new project manager and has recruited new team members to deliver in-person activities and to manage the financial and administrative arrangements around the necessary travel. It is delivering training on-site on a bilateral basis, but also using large regional workshops with ECAC's sister regional organisations to renew contacts with several Partner States at once. It has adapted some of its activities to take account of the discontinuity, for instance by combining new training with a “refresher” of training delivered before the pandemic. It is negotiating with the European Union (and with the support of the sister regional organisations) a one-year no-cost extension to the project to enable it to deliver a volume of activities along the lines originally planned. And it is now extending its activities to Asia with training activities being planned in three central Asian countries and a regional workshop in Asia Pacific as a start to work in this region.

At the end of 2022, 62 activities had been delivered with the participation of 60 Partner States and 20 hosting countries. But as well as delivering the activities planned, the project continues to learn from the difficulties experienced in its early stages. We hope this experience will provide lessons that will have importance for other capacity-building programmes across aviation domains. If so, then perhaps, in spite of early setbacks, the project's legacy may go even beyond its original vision. ●



Participants in the ACAO, AFCAC, ECAC joint workshop on innovation and cyber security, Marrakesh, 5-7 September 2022

# The CASE II experience: implementing an interregional workshop

**Capacity building and aviation security are two important components of a comprehensive aviation security system.**

As part of the CASE II Project providing capacity-building opportunities to Partner States, the organisation of workshops (regional or interregional) falls under the “awareness raising activities” category and focuses on threats to civil aviation.

From 5 to 7 September 2022, ECAC (through the EU-funded CASE II Project), the Arab Civil Aviation Organization (ACAO) and the African Civil Aviation Commission (AFCAC) co-organised a workshop on “innovation and cyber security” in Marrakesh, Morocco. This was the first interregional in-country workshop to be organised within the framework of the CASE II Project and jointly organised with sister organisations.

The workshop was opened by high-level officials from the host country and the organisers: Mohammed Abdeljalil, Minister of Transport and Logistics, Morocco, Abdennebi Manar, ACAO Director General, Adefunke Adeyemi, AFCAC Secretary General, and Patricia Reverdy, Executive Secretary of ECAC.

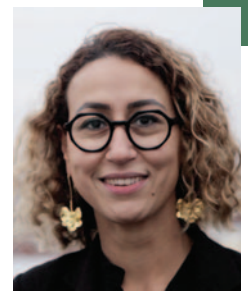
A dedicated website was created by ACAO where all the information on the workshop can be found: <https://acao.org.ma/ics/>.

To realise this first workshop, the project team worked closely with AFCAC and ACAO to bring together 110 participants from 46 Partner States from Africa and the Middle East to discuss various topics in the domain of innovation and cyber security in the context of aviation security.

The topics discussed by the 21 speakers – subject-matter experts from ECAC (CASE II Project Team, Executive Secretary, the United Kingdom), AFCAC and ACAO Member States (Egypt, Lebanon, Morocco, Oman, Saudi Arabia, United Arab Emirates), the Cooperative Aviation Security Programme Middle East as well as from the United States’ Transportation Security Administration (TSA), ICAO, United Nations Office of Counter-Terrorism (UNOCT) and industry stakeholders – were varied though all revolved around the concept of a “smart airport”, one in which security technologies intersect seamlessly with operating staff to create a system which is both resilient and proactive in the face of virtual threats.

More precisely, the following topics were discussed across five sessions:

- new technologies and concepts in aviation security, and the current challenges affecting rapid development and possible solutions, as well as the cooperation among governments, industry and researchers to promote innovation in aviation security;
- the implementation of smart aviation security systems and how to assist humans as they operate these systems;



**HANAN ACHAHBOUN**

Project Manager,  
ECAC CASE II Project





Workshop session,  
Marrakesh,  
5-7 September 2022

“  
Finally, capacity building and regional workshops can help to ensure that countries have the necessary resources and expertise to effectively implement aviation security measures and be better prepared to respond to threats and mitigate risks.”

- keys and challenges for regulators and industry to improve emerging technology and processes, and to implement fully integrated and smart aviation security systems;
- how to discover and mitigate cyber security in the general context of civil aviation;
- cyber threats and risks in air navigation systems, particularly the necessity for, and best practices in, capacity-building training for airport staff to increase readiness and vigilance against cyber threats.

Simultaneous interpretation in Arabic, English and French was available to ensure all the attendees could understand.

The content (drafting the agenda, search for and deployment of moderator and speakers, distribution of the outcomes) and all the logistics, including on-site, were managed by the CASE II Project team, ACAO and AFCAC.

In addition to presentations, the workshop included breakout sessions, Q&A sessions and *tours de table* to ensure interactivity.

Indeed, capacity building – and interregional workshops in particular – in aviation security can have a positive impact on aviation safety and security. This kind of workshop provides a platform for countries to exchange ideas, share best practices and lessons learned in aviation security, as well as to develop strategies to address common challenges. It also helps to build relationships between countries and regions, which can lead to increased co-operation and collaboration in the field of aviation security. Additionally, these workshops can help to raise awareness of the importance of aviation security and can provide a forum for countries to discuss and develop strategies to address emerging threats.

Finally, capacity building and regional workshops can help to ensure that countries have the necessary resources and expertise to effectively implement aviation security measures and be better prepared to respond to threats and mitigate risks.

From the project’s perspective, this interregional workshop was a great opportunity to strengthen regional networks and to engage in discussions

Side meeting  
of co-organisier  
representatives  
(Moroccan Ministry  
of Transport, ACAO,  
AFCAC, ECAC and TSA)



## View from a sponsor



**Nathalie Pauwels**,  
Head of Unit Stability  
and Peace - Global and  
Transregional Threats,  
Service for Foreign  
Policy Instruments /  
European Commission.

**The European Union (EU) is a global player in security.** In the EU Service for Foreign Policy Instruments (FPI), we support partners' efforts to address global, transregional and emerging threats in line with agreed goals and principles set out in the EU's counter-terrorism policy, by addressing its root causes and supporting Partner Countries to develop adequate responses. To address these different threats, we have developed thematic facilities that mutually support actions and address a variety of issues in countering terrorism and preventing/countering violent extremism. These are flexible and provide demand-driven, tailor-made support to Partner Countries at different levels (anticipation, prevention, protection and response) to enhance their capacities to address terrorism from a rule-of-law perspective. Each facility has a global or transregional scope and offers access to a range of specific activities. CASE II is one of our EU-funded global facilities that contribute to the fight against the evolving threat of terrorism, as stated in the EU's Counter-Terrorism Agenda (December 2020). It is a point of reference for more secure civil aviation security regimes in Partner States to counter the threat that terrorism poses to civil aviation. Civil aviation remains a target for terrorist groups worldwide. It is therefore important for all airports to use the most up-to-date detection technologies and receive tailored capacity building to counter that threat. ECAC has been implementing the CASE Project since 2015 and is a longstanding partner for the EU, being the only body of its type able to mobilise the expertise from its Member States and facilitate sharing of knowledge between national experts in the Partner Countries and experts from ECAC Member States. ■

with potential new Partner States, as their designated participants turned out to be the relevant officials to talk to about possible capacity-building activities to be received or hosted by their respective countries. This is notably the case for Gabon, Madagascar, Tunisia and the UAE.

This partnership also helped to leverage resources and expertise and is an effective way to achieve greater impact and results.

Given the feedback received from the participants, this first tripartite collaboration for CASE II was a success and a solid foundation for future collaboration. Other interregional and regional workshops are scheduled for the remaining implementation period of the CASE II Project, responding to an increasing demand from Partner States to have more workshops on specific topics related to aviation security. ●

**Hanan Achahboun** joined the ECAC CASE II Project as project manager on 1 June 2022. She holds a master's degree in political sciences and has 10 years of experience in project management both at national and international levels, with a focus on international technical cooperation in the security and defence sector for the past five years. Hanan will be responsible for leading, managing and coordinating the project.

## View from a partner

**The CASE II Project is assisting AFCAC Member States in achieving effective aviation security outcomes and sustainable implementation.** The project has assisted 94% of the AFCAC Member States – which is an absolute record – supporting the continent in ensuring compliance with international conventions, ICAO Standards and Recommended Practices (SARPs) and providing guidance material related to aviation security to enhance its aviation security capabilities. The project's coordination with AFCAC is leading to successful implementation of the activities in line with States' real needs. This will enhance aviation security and operations and ensure effective implementation issues identified during Universal Security Audit Programme (USAP) audits and other evaluations are addressed in accordance with the ICAO Global Aviation Security Plan's aspirational targets and the Windhoek Declaration and Targets.

Capacity-building initiatives, activities and assistance are critical to address aviation security deficiencies and increase the effectiveness of the aviation security system. The major challenges to overcome to achieve effective implementation of these initiatives are the long-term commitment of the beneficiaries, and a willingness to seek the root cause of any deficiency, along with openness to changing security culture and embracing new technologies. ■



**Jamel Dridi**,  
Aviation Security and  
Facilitation Expert,  
African Civil Aviation  
Commission

# My experience as a CASE II Project secondee

Capacity building is one of the core objectives of the ECAC CASE II Project, as it was for the first CASE project. Following this principle, many of the decisions and actions within the project are taken, and one of these decisions was to promote a secondment position for an expert from an ECAC Member State.



**MIGUEL MARTÍN**

Former CASE II Project secondee,  
AVSEC National Auditor, Aviation  
Safety and Security Agency  
(AESA), Spain

I heard about the secondment opportunity through my superiors in the Spanish Civil Aviation Authority (AESA), and the company I worked for, SENASA, which provides technical support to AESA. I had been developing my career as a national civil aviation security auditor for a few years, taking on more responsibilities as I gained valuable experience – which included participating as Spanish representative in some of ECAC's working groups. Immediately upon reading the offer it appealed to me and seemed a wonderful opportunity to develop my career working on an international project.

The CASE II Project combines some characteristics that I found particularly engaging; these included the possibility to share the knowledge I had gained in previous years with colleagues in the industry who may not have had the same opportunities to experience them. The chance to explore and enhance my own skills as an instructor in conditions very different to the ones I was used to was also something that I wanted to be exposed to.

Apart from the aspects related to the job itself, the opportunity to come and live in a city like Paris, to work alongside such skilled colleagues from other countries, and to experience many cultures during missions was tremendously enriching from a personal point of view.

During the months I spent as part of the CASE II team, we were able to deliver training activities and workshops very efficiently considering how few of us there were. The excellent coordination between us made this possible. On the subjects covered – all related to aviation security – the capacity increased as time went on as the team developed more and more material.

One of the principles of the project is to deliver training activities on the ground. Although online training was also provided, I was able, through my participation in the missions, to experience first-hand the difference between the two formats. How we engaged with the participants on-site and the relationships created during these short periods of time allowed them to gain much more from the courses. But not only this; the CASE II experts were also able to analyse and see the reality of the situation in the Partner State in relation to the topic, to thus focus their explanations, and to suggest further activities to address the weak points identified.

In our activities in the Partner States, we faced many different realities in terms of levels of knowledge and resources. However, on all occasions we were received with enthusiasm and the desire to learn. In general, the aviation industry in these countries is not as developed as it can be in many of the ECAC Member States. Typically, we encountered airports that were not busy, with just one or two international airports in the country. This means there is no room for complex civil aviation organisational set-ups, and that the people in charge are often not exposed to a wide variety of operations, procedures, technology, etc. In that sense, the CASE II Project courses have a direct impact on the people carrying out oversight, developing security requirements, or even applying security measures. It is the perfect occasion to share with them the instructors' experience, and other ways to address organisational problems. At the same time, it allows them to gain confidence in their own developments when they realise, if that is the case, that the same thing is being done somewhere else with a positive outcome.

To summarise my contribution as an instructor, it began very much at the start of my participation in the project when I was selected to participate in delivering the Best Practices for Covert Testing course in Banjul, Gambia, from 17 to 20 January 2022. At that time, this presented a great challenge for me as I had no experience delivering courses in English and under such different conditions from those I was used to. Through this course I felt my confidence grow, and in part thanks to my colleague Jae Tonkin, who was extraordinarily supportive.

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In that sense, the CASE II Project courses have a direct impact on the people carrying out oversight, developing security requirements, or even applying security measures.”



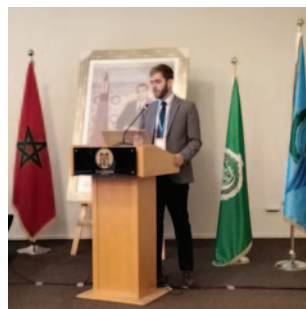
After this first trip, I delivered several activities in other countries over the next months, including Botswana, Malawi and Uganda. Those missions were extremely enriching not only because I was exposed to new material but also because I partnered with other experts such as Nina Smith (from the United Kingdom Civil Aviation Authority) and Aleksandar Yankov, my CASE II colleague. Sharing time and discussions with such well-prepared and experienced colleagues is always an educational experience.

My participation in the project included not only being an instructor but also developing new training material. Making use of my previous experience, I created a new course, “Best Practices for Security Equipment Inspection”, which I was able to present in Botswana, Ghana and Namibia, and which received very positive feedback. In that respect, my job at CASE II in Paris has been hugely supported since the beginning by my colleagues Jae [Tonkin], Aleksandar [Yankov], Jasna Gamber and later by Hanan Achahboun. Being able to share the various possible approaches with them at the different phases of development allowed for very enriching exchanges of view and certainly made the outcome of the activity much more valuable.

In the later stages of my participation in the project, I continued to develop course material, and in particular a Best Practices in Identifying and Mitigating



The Gambia: Best Practices for Covert Testing course, January 2022



Marrakesh: Interregional Seminar for Innovation and Cyber Security, September 2022

Emerging Threats course. I also acted as a moderator in the workshop on innovation and cyber security held in Marrakesh in September 2022. I ended my secondment delivering the Best Practices for National Auditors course in Sierra Leone accompanied by an external expert, David Williams, from the United Kingdom Civil Aviation Authority.

Overall, I believe the CASE II Project's objective of capacity building is being achieved. Without a doubt from my side, as I have gained invaluable experience as an instructor, vastly improved knowledge about aviation security, and lots more confidence in my skills and capacities. From the Partner States' point of view, I also believe that my contribution to them was valuable as revealed by the standardised feedback and confirmed in conversations with some of the participants and representatives. All in all, I am extremely thankful for the opportunity and pleased to have made good use of it. ●

**Miguel Martín** recently finished his nine-month secondment from the Spanish Aviation Safety and Security Agency (AESA) to the CASE II Project. Since the beginning of 2018 when he joined AESA, Miguel has participated in many aviation security oversight activities as national auditor, as well as representing Spain in the ECAC Common Evaluation Process for security equipment Management Group and the ECAC Technical Task Force. During his period with the CASE II team, he contributed to delivering and developing capacity-building activities in nine CASE II Partner States in Africa.



Uganda: Best Practices for Covert Testing, February 2022



Ghana: Best practices for security equipment inspection, June 2022



## **Aviation security technology:** supporting future resilience



# The role of technology in civil aviation security operations

This article endeavours to highlight the role and importance of technology in civil aviation security operations. A decent amount of literature was reviewed to understand the subject, and the article will seek to emphasise how, where modern technology is used in securing civil aviation operations, it will maximise the security benefits.

The article looks at the application of innovative technologies that will ease the flow of passengers and staff and overcome congestion and delays. Screening passengers at airport security checkpoints is, generally, seen as one of the most stressful experiences for a passenger. During this process, they may be required to remove their shoes and other belongings such as purse, belt, metallic money and items, jewellery, mobile phones, etc. for inspection and clearance. This process results in the formation of queues, which results in delay, thus making passengers impatient, stressed and anxious. This requirement has become all the more relevant and important in view of the problems encountered because of the outbreak of the COVID-19 pandemic. The pandemic forced the aviation industry to seek to restore confidence in air transport and increase operational efficiency by having in place processes to facilitate the safe and smooth flow of both originating and transfer passengers at airports.

## Introduction

Since the events of 11 September 2001 in the United States, aviation security has become one of the most important issues today confronting civil aviation operations globally. This particular event has radically enlarged the boundaries of civil aviation in general and aviation security in particular. The post 9/11 scenario necessitated the deployment of state-of-the-art airport security systems in terms of technology, equipment and personnel. This was important and essential to regain trust in civil aviation, as well as to increase the confidence of the travelling public.

It is a known fact that the main accountability of the civil aviation industry is to protect civil aviation operations against terrorism and other acts of unlawful interference. This was, indeed, a difficult mandate since it had to delicately balance aviation security and facilitation requirements.

The purpose of this article is to highlight the role technology plays in civil aviation security operations. The International Civil Aviation Organization (ICAO)<sup>(1)</sup>, a specialised agency of the United Nations (UN), has been revising and revisiting threats to civil aviation operations from time to time. In doing so, it has developed a mechanism whereby threat to civil aviation security is examined and updated/revised on a regular basis. This is done by means of revising the “ICAO Risk Context Statement”<sup>(2)</sup>. The enormous growth experienced by civil aviation before the COVID-19 pandemic is well known. In order to aid and assist the growth of civil aviation operations globally, it is prudent to employ appropriate aviation security measures and technology that will facilitate and sustain its growth.



**HAMAD SALEM AL MUHAIRI**

Assistant Director General,  
Aviation Security Affairs Sector,  
General Civil Aviation Authority of  
the United Arab Emirates (UAE)



“There is a critical requirement to consider investment in technology for aviation security purposes along with other prevalent processes and procedures that are already in place.”

Some of the areas of importance as well as sensitivity that come to mind are as follows:

- (i) security screening of passengers and staff;
- (ii) easing out crowding or congestion at security checkpoint by developing and using new technology;
- (iii) reducing the number of false alarms at screening checkpoints;
- (iv) deployment of explosive detection technology for screening passengers and staff at passenger and staff screening checkpoints;
- (v) possibility of introducing artificial intelligence (AI) for aviation security purposes; etc.

Even the ICAO Global Aviation Security Plan, also known as GAsEP, encourages ICAO Member States to give priority to, and incorporate, innovation and technology for the development of aviation security. One of the five priority outcomes of ICAO's GAsEP is to improve technological resources and foster innovation. Under this plan, ICAO Member States are advised and encouraged to promote innovative techniques and technologies.<sup>(3)</sup>

Issues related to aviation security are very peculiar in nature and need to evolve on a regular basis to deter/desist terrorists from committing acts of unlawful interference, and to use technology to facilitate the movement of passengers at an airport with minimum difficulty, delay and disruption. Hence, there is a critical requirement to consider investment in technology for aviation security purposes along with other prevalent processes and procedures that are already in place.

This combination of using state-of-the-art technology along with the relevant measures and procedures required to safeguard civil aviation processes against acts of unlawful interference can simplify and facilitate the development of a multilayered and robust aviation security system.

This article seeks to review the importance of technology in protecting civil aviation from acts of unlawful interference, with special reference to the following:

- (i) use of technology for screening passengers, staff, cargo, catering and other items carried on board an aircraft and to reduce the rate of false alarms;
- (ii) methods to increase aviation security screening capacity;

- (iii) use of biometrics in detecting possible offenders and easing the processing of passengers and staff through an aviation security screening checkpoint, etc.

Some examples of the above are as follows:

- (i) **Passenger screening technologies:** The increase in threat to aviation security from non-metallic weapons and explosives has led to research in the development of new screening technologies in respect of passengers, which includes techniques for detecting chemical traces and imaging methods that can be seen through clothing.
- (ii) **A system to profile a passenger:** Some airlines have quite often been targeted by terrorists. One such airline has developed a detailed profiling programme that requires inspecting all types of baggage as well as interviewing all passengers face to face by security personnel. This airline makes it a point to identify passengers who could be a threat to its security rather than to detect prohibited items that could be used to hijack or destroy an aircraft.
- (iii) **Imaging technologies:** There are quite a few technologies available that can detect metallic as well as non-metallic weapons, explosives and their component parts. This technology involves no physical contact with the passenger and can be used for screening passengers, staff, visitors, etc.
- (iv) **Millimeter-wave imaging technology:** This technology operates as a range radar system; the system directs a narrow beam of millimeter wavelength energy at a target and detects the reflected rays. The beam is examined from head to toe of a passenger or staff member to produce an image of the subject. This tool uses low-energy, low-intensity x-rays revealed from the subject to produce an image. Images generated by this technology are then construed to identify the presence of matter both metallic and non-metallic that may be concealed under the clothing of a passenger or a staff member.
- (v) **Technology to detect trace emitted by explosives:** This technology is also known as trace detection technology. This is done by chemical identification of explosive material or vapour containing explosive material.

### The importance of technology in the development of civil aviation security

Also, taking into consideration the effect of the COVID-19 pandemic on civil aviation operations, it would be incorrect to state that the pandemic did not have an impact on civil aviation security at both airport and aircraft operator levels. It was interesting to note how civil aviation security coped with and addressed these unexpected challenges. It is also worth noting how the development of technology assisted and played an important role in overcoming the challenges in this field, especially in areas of screening passengers, staff, cargo and mail.

It will be pertinent to mention the second report entitled *Progress Toward Objectives*, produced by the Committee on Assessment of Technologies Deployed to Improve Aviation Security, the National Advisory Board in the United States (Division on Engineering and Physical Sciences, National Research Council). This committee concluded that aviation security is one of the most important and vital issues confronting not only the United States but the world in general. The events of 9/11 resulted in the catastrophic loss of human life and colossal damage to property. This incident also radically extended the boundaries of the types of action that could be employed against civil aviation operations. The necessity to safeguard and guarantee public safety and instil confidence amongst the general public would require the deployment of aviation security systems at airports that could counter these latest threats to civil aviation. This effort would require the deployment of state-of-the-art technology along with qualified and trained personnel<sup>(4)</sup>. The COVID-19 pandemic, no doubt, also posed a similar challenge to civil aviation security internationally, if not directly in terms of acts

Modern and large airports across the globe that handle substantial passenger and cargo volumes require modern and state-of-the-art technology, aviation security systems, processes and procedures, as well as well-trained and better-equipped aviation security personnel.

of unlawful interference but indirectly as to how to protect civil aviation in view of the challenges posed by the imposition of COVID-19 restrictions. It is an irrefutable fact that the COVID-19 pandemic posed very serious challenges to aviation security officers in their ability to carry out their duties effectively and efficiently.

### Significance of technology in civil aviation security

In aviation security, the significance of technology cannot be overemphasised or underestimated. The threat to civil aviation is prevalent globally and is likely to remain the same in the unforeseeable future too. It is a source of major concern to aviation security regulators, airport operators, aircraft operators and other stakeholders around the world. Hence, it has become increasingly important for these entities to devise unique ways and means to enhance aviation security. According to Kruszka, Klósak and Muzolf (2019)<sup>(5)</sup>, miscreants, terrorists, criminals, etc. have demonstrated from time to time their capability and intent to target civil aviation operations, and the seriousness as well as the magnitude of the threat they pose to the civil aviation industry in order to achieve their sinister motives. This necessitates aviation security stakeholders to use the latest state-of-the-art and sophisticated technologies to counter such threats, especially at a time when the aviation industry has become so important and critical in facilitating movement of cargo, trade, travel and tourism.

As far as the United Arab Emirates (UAE) is concerned, Dubai International Airport is continuously in the process of updating, adapting and adopting the latest technologies to process the movement of passengers in the minimum time without compromising aviation security and in accordance with the best practices practised globally at major international airports in order to enhance and enrich the passenger's feeling and experience. In the words of Major General Pilot Ahmed Bin Thani, Assistant





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**Hamad Salem Al Muhairi** is the assistant director general, Aviation Security Affairs Sector in the General Civil Aviation Authority of the United Arab Emirates (UAE). He has 23 years of experience in the field of civil aviation security, facilitation and the safe transport of dangerous goods by air.

He is a member of the ICAO Aviation Security Panel and the Dangerous Goods Panels, vice chairperson of the ICAO AVSEC Panel, and rapporteur of the ICAO Study Group – Aviation Security Incident Reporting (SG-ASIR), ICAO AVSEC Panel Task Force on Assessing the Enhancement of Compliance with Annex 17 (TF-AEC17), and the ICAO Aviation Security Panel Task Force of the Governance Handbook (TF-GH).

As part of his responsibilities, he is in charge of providing aviation security safeguards, measures and procedures at all international and domestic civil airports within the UAE in order to safeguard civil aviation operations against acts of unlawful interference.

General Commander for Ports Affairs at Dubai Police, “Airport security technology is a key part of airport management and operation. Dubai Airport places it at the top of their priorities to provide a safe and smooth travel experience for more than seven million passengers who use it every month.” He also stated that “While airports and airlines were looking for new ways to simplify the travel experience and enhance passenger reception and baggage handling, smart technologies and solutions such as biometrics and automated checkpoints have already begun to redefine the airport experience around the world. Dubai Airport has no limits to invest in deploying the best technology to enhance and ensure a safe and comfortable travel experience for its passengers. Dubai is moving towards more innovation in smart solutions to keep pace with rising numbers of airport passengers.”<sup>(6)</sup>

Along similar lines, Abu Dhabi International Airport, which is the second major airport in the UAE, has tried a new system based on artificial intelligence. This trial was undertaken in an effort to optimise various processes and facilitate social distancing at the airport. The trial was needed because of the COVID-19 pandemic. This system, also known as the new enhanced “Smart Travel” system, was

developed by Abu Dhabi Airports in collaboration with a company in order to streamline various airport processes such as, but not limited to, check-in operations, passenger arrival and departure times, etc. In this trial, selected passengers travelling with Etihad Airways were notified about the optimal time to arrive at the airport, thus saving them time and allowing aviation security personnel and other operational personnel at Abu Dhabi Airport enough time to undertake their aviation security and operational responsibilities effectively and efficiently. This process was also meant to basically minimise queuing and ensure social distancing at the airport.<sup>(7)</sup>

## Conclusion

Air transport is an important player in the world today. It will not be out of place to state that without the air transport industry, rapid economic growth and development may not be possible. The air transport industry is one of the enablers of business and development. Air transport has enabled the world to become a global village. It facilitates the integration of the global economy and provides vital connectivity at all levels, such as national, regional or international. This aviation industry facilitates and helps to generate trade, commerce and tourism. It also provides, as well as assists in, the creation of employment opportunities across the globe.

Modern and large airports across the globe that handle substantial passenger and cargo volumes require modern and state-of-the-art technology, aviation security systems, processes and procedures, as well as well-trained and better-equipped aviation security personnel. ●

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# Open architecture in airport security equipment – a collaborative approach

## Introduction

Open architecture is a term that refers to the design of a system or product that allows for the integration of components or technologies from multiple sources. In the context of security equipment, open architecture can refer to security systems and software that are designed to be flexible and adaptable, and can easily integrate with other security technologies and solutions.

Historically, security equipment and associated software did not follow the principles of open architecture, limiting the interoperability with other systems. For many years, this has not been considered as an issue; security equipment was mostly deployed following a standalone approach and there was little request from end users to improve connectivity and communication between security solutions. Also, the variety of equipment deployed to enforce security was relatively limited, most of the checkpoints being equipped with single-view x-ray coupled to roller beds, walk-through metal detectors and some explosive trace detection systems. However, over the last ten years the variety of equipment available for deployment has significantly increased and there have been requests to move away from the traditional approach and to interconnect equipment through open architecture principles.

There are several benefits with such approach. First and foremost, open architecture allows for greater interoperability between different security technologies, which can make it easier to manage and maintain a comprehensive security system. This is especially useful in large or complex security systems, where it may be necessary to integrate a wide range of security technologies and devices.

Another benefit of open architecture is that it allows for greater flexibility in the deployment and management of security equipment. With open architecture, it is easier to add or remove components or technologies as needed, without having to completely replace the entire system. This can save time and reduce cost, and can also allow for the system to be more easily customised to meet the specific needs of a particular end user or environment.

In addition to these benefits, open architecture can also help to ensure that security equipment is more

secure and reliable. By using components and technologies from multiple sources, it is possible to take advantage of the best available solutions, rather than being limited to a single vendor or product line. This can help to ensure that the security system is as robust and reliable as possible, and can also help to reduce the risk of vendor lock-in, which can be a concern with proprietary systems.

Despite these benefits, there are also some challenges to using open architecture in security equipment. Defining the technical aspects (e.g. image format), and solving the liability and intellectual property questions are some of the elements that have to be addressed. To do so, there is a need for a coordinated approach involving the entire aviation security ecosystem.

## Coordinated steps forward

To promote the introduction of open architecture in airport security systems, leading regulators and airport operators from around the globe published a paper in July 2020<sup>(1)</sup> describing, through broad guidelines, how airport security systems can share data and how airports can work with partners to provide a path towards open architecture. This paper created a lot of interest but it was not self-sufficient, and it was rapidly identified that airports, regulators, manufacturers and solution providers had to collaborate in an organised manner to deliver the open architecture objectives.

Throughout 2021 and 2022, there has been a massive effort from aviation security stakeholders to develop the elements that were included in the paper mentioned above, identify solutions, and understand the challenges faced by the different parties. Original equipment manufacturers have been closely involved in the process and specific recommendations have been identified in the following fields:

- Technical standards
- Testing and certification
- Commercial, liability and intellectual property.

These recommendations should be published in the near future in a new version of the open architecture document and will support the deployment of solutions directly benefiting from the open architecture principles.



**SÉBASTIEN COLMANT**  
Head of Aviation Security,  
ACI EUROPE

“Original equipment manufacturers have been closely involved in the process and specific recommendations have been identified.”

(1) Open Architecture for Airport Security Systems (aci-europe.org)



“  
Authorities will  
have to identify  
how testing and  
certification of  
security equipment  
should evolve.”

### Next steps – delivering benefits

Given the scope of open architecture and the variety of security equipment which could benefit from its principles, it is not possible to develop a comprehensive list of use cases; however, some of them are prioritised by airports and should find their place in their operational environment in the coming years.

#### FULLY CENTRALISED IMAGE PROCESSING

Whilst some airports have successfully implemented centralised image processing <sup>(2)</sup> (CIP), the concept has some limitations. It is currently difficult to process simultaneously images produced by screening equipment from different manufacturers or that are from different types (conventional x-ray, CT). This means that airports are limited in their ability to take the full benefits of CIP. For example, when two terminals are equipped with different fleets of screening equipment, airports are unable to distribute images to a common viewing platform.

With a common image format, it will be possible to centralise images produced by any screening equipment. Combined with an ability to transfer images in real time, this will enable airports to review images from any system and from any location to maximise operational benefits. This could be a major step forward for airport groups that are operating multiple airports as it would greatly facilitate their ability to centralise screening operations across their airports to improve efficiency and facilitate oversight, training and consistency of the security output.

#### DATA SHARING

Current security equipment limit the ability for airports to build a comprehensive situation awareness as data are not easily available for inclusion in dashboards or reports. Interoperable security equipment will facilitate automated data collection across the operations

and their inclusion in management tools developed to fit airport operational needs.

Another expected benefit is the ability to easily pull images from screening equipment and to include them in incident reports or in alarm resolution processes shared with airport management and/or authorities. For example, explosive ordnance disposal teams could receive in real time images from screening equipment to start their risk assessment as early as possible.

#### MONITORING AND MAINTENANCE

Whilst computerised maintenance management systems (CMMS) are widely available, security equipment is often integrated in vendor-specific monitoring systems limiting the ability for airports to run their maintenance process efficiently and effectively.

Open architecture principles will support the integration of security equipment in the airport CMMS to further improve the maintenance process and availability of compliant security equipment.

#### USER MANAGEMENT

Managing user rights and privileges on security equipment can be a challenging task as these data are often registered and maintained on separate databases for each type of security equipment. Keeping these multiple databases updated is resource intensive as airports must enforce elements such as expiry dates, certification/training status for each and every security officer on all the equipment that they are supposed to use.

Open architecture will enable a single master database to be built, which could be synchronised with the local user databases of the different security equipment to reduce the overall administrative workload and limit human errors leading to potential non-compliance (e.g. a security officer allowed to use a screening equipment without having been recertified). It could also facilitate the implementation of a single sign-on process to improve the security officer experience.

(2) Centralised image processing is a concept where images generated by screening equipment are networked. It enables to review images with more flexibility, moving away from the legacy CONOPS where a security officer is deployed for every screening equipment. With CIP, airports have the ability to improve the efficiency level of their operations.

## Airports and other end users interested by the concept will have to include specific open architecture requirements in their tenders.

### DATA SHARING WITH EXTERNAL PARTIES

Through open architecture, it will be possible to share data between departure, arrival, and transfer airports. For example, it means the hold baggage data, including images, type of screening equipment and detection algorithm results at the departure airport could be aggregated and made available to airports and other parties, such as airlines, customs and police worldwide to facilitate the passenger journey or the enforcement of specific requirements.

### THIRD-PARTY ALGORITHMS

The ability to run third-party algorithms on screening equipment also opens new opportunities for airports and authorities as it will potentially increase the number of solutions available to deliver the screening requirements, and will enable tailor-made solutions to be developed.

Theoretically it could be possible to develop “screening equipment agnostic” algorithms which could be deployed on any hardware producing an image compliant with open architecture.

### Closing remarks

Whilst the potential benefits of open architecture are significant, stakeholders will still be required to collaborate closely in the foreseeable future to enable them.

Airports and other end users interested by the concept will have to include specific open architecture requirements in their tenders and will have to evaluate the level of compliancy of equipment providers during the tender process. The development and promotion of recommended tender requirements should help to limit misunderstanding. This also means that equipment manufacturers and service providers will have to ensure that their products are developed and maintained according to the latest open architecture specifications.

Last but not least, authorities will have to identify how testing and certification of security equipment should evolve to enable some of the benefits that are considered (e.g. how third-party detection algorithms could be certified independently from the screening equipment hardware). ●

**Sébastien Colmant** joined ACI EUROPE in 2021 where he is responsible for aviation and cyber security. Sébastien has spent his whole career in aviation, predominantly on aviation security operations, policy and development. He previously worked at IATA where he first supported the Smart Security project and later went on to supporting AVSEC advocacy efforts and delivering consulting support around the globe. He was previously responsible for developing and maintaining efficient and compliant airport security processes at Charleroi Airport, Belgium. Sébastien started his career as a legal adviser for the Belgian Civil Aviation Authority. He holds a master's degree in law.







# ECAC Common Evaluation Process of security equipment



ECAC Executive Secretary, Patricia Reverdy, spoke with CEP Management Group chair, Alastair McIntosh, on the benefits of the CEP for ECAC Member States

## interview with



**ALASTAIR MCINTOSH**

Head of Research, Analysis and Development (RAD),  
Department for Transport,  
United Kingdom

The ECAC Common Evaluation Process (CEP) of security equipment is the laboratory testing programme established by ECAC Member States to assess security equipment against ECAC/EU performance standards and provide a common reference for national administrations to certify/approve the security equipment deployed at airports under their responsibility.

The aims of the CEP are to evaluate the technical performance of security equipment in an objective and standardised manner across the different national test centres participating in the process, and to provide ECAC Member States with reliable information on equipment performance against adopted technical standards.

**ECAC NEWS:** First of all, thank you for having accepted to talk to us about the CEP process and its achievements over the last years. You have been the chair of the CEP Management Group for one year now. We would appreciate having your views on the process, and especially what you think it brings to the Member States of ECAC.

**ALASTAIR:** I think it is probably worth a bit of framing first. The CEP's mission is to provide assurance that the capabilities of aviation security equipment meet adopted technical standards. To do that, there are a number of test centres within the CEP that test equipment against Common Testing Methodologies, which have been developed and agreed by experts from across numerous ECAC Member States.

By following this approach, no matter which test centre has tested the equipment, we are assured that if a piece of equipment has passed the testing process, it meets the standard it was tested against. As such, Member States have the knowledge that the equipment will be able to detect the threats they are interested in at their airports. With this rigorous testing approach, they can then approve it for use at the airports in their countries.

**What difference would it make for ECAC Member States if the CEP didn't exist?**

Prior to the CEP, it was up to national authorities within the Member States – and separately of course to ECAC – to undertake testing of aviation security equipment themselves. To do that it requires having a test centre, technical experts, access to the threat materials you are concerned



## The CEP brings a unified standard testing approach.

about, and the appropriate health and safety regimes, etc. While manufacturers do pay an administrative fee when they bring equipment for testing, this is a very expensive undertaking, so the benefit to the 44 ECAC Member States is that the contributing authorities<sup>(1)</sup> of the CEP have taken on this burden. If the CEP didn't exist, it would be up to national authorities to find the funding and to set up that capability.

**So in a system where the CEP doesn't exist, we would see a fragmentation of testing across Europe?**

Any State can undertake national testing. This is what we did in the UK before 2009, and where possible we would make use of national testing undertaken in other countries. For example, we might have made use of results from the French test centre – STAC. We would review any test results they had undertaken, and either we would be happy with the approach and testing undertaken, approving the equipment for use in the UK, or we might decide that we needed to do some extra tests at our own test centre before we could give approval.

But this results in a situation where you could have very different approved equipment lists across Europe and ECAC's 44 Member States. This means that not only could Member States not know how effective the security is in countries where flights are departing for their country, but it also produces a very confused market for the manufacturers, where there may be different requirements across every Member State.

The CEP brings a unified standard testing approach. This means that across our 44 Member States and within Europe (because since October 2020 CEP-approved equipment is automatically eligible for EU approval and the EU stamp) there is a common approach. And that is the key part. It not only saves money but ensures the threats we are concerned about are addressed, and gives a stable market for manufacturers and their future developments.



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**What do you think is the added value of the CEP to the manufacturer? They participate, they send their equipment to the CEP centres, they pay for tests to be performed. But what do they get out of the CEP?**

I would ask "what is the common ground between all the stakeholders of the CEP?". And really, it is the desire to ensure that aviation is safe and secure.

For Member States it is about deploying equipment that has capabilities to detect the threats they are concerned about.

For manufacturers, it's about developing equipment which can detect those threats. But to do that, they need a process they can come to with their equipment; they can get it tested, knowing the testing is rigorous, and they can receive feedback so if they don't pass the evaluation process they can then reapply having made changes.

This what the CEP provides. Going through the CEP they can be sent to a number of test centres – we have capacity in France, Germany, the Netherlands, Spain and the United Kingdom. Their equipment is then tested against the Common Testing Methodology so it doesn't matter where it is tested. And if the testing is passed, they ultimately receive the stamp of endorsement that their equipment meets the required standard. It is worth mentioning that it is still up to the national authorities to decide if they wish to approve that equipment to be deployed.

The CEP is the largest evaluation programme for aviation security equipment in the world, covering 44 ECAC Member States. We also know that outside of ECAC, a number of non-ECAC Member States also

**“The CEP is the largest evaluation programme for aviation security equipment in the world, covering 44 ECAC Member States.”**

(1) France, Germany, the Netherlands, Spain and the United Kingdom



look at the public listings of the equipment we have evaluated, making use of our lists rather than undertaking testing themselves. The CEP process benefits not only the market within Europe but also worldwide.

“  
We currently have nearly 700 configurations on the CEP equipment list that meet ECAC/EU performance standards.”

**Indeed. ECAC publishes on its website the list of equipment that is found to meet performance standards, and we understand this is being used widely by non-European States as a reference for their own procurement procedures. We have seen this quite a lot in some countries where the procurement documentation says that equipment on the ECAC list – and no other – can be deployed. So it is also a recognition of the value of the CEP for the wider international community.**

I agree. The other aspect is that, in addition to the CEP, we also have the ECAC Technical Task Force (TTF). We rely on the TTF, comprising multiple Member States’ technical experts, to develop the Common Testing Methodologies our test centres use. This means that those outside ECAC know there has been rigorous technical assessment, discussion and decision making to come up with not only how we test equipment but the standards they need to achieve.

**The CEP was created almost 15 years ago, in 2009. You’ve mentioned a lot about its added value but if you had to summarise the top three main achievements of the CEP, what would they be?**

I would go back to the comment “what if the CEP didn’t exist?”. We brought together what were fragmented testing regimes in national authorities within ECAC. Since 2009, we have moved from ex-

plosive testing system (EDS) testing expanding across six other categories of equipment – nearly an extra category a year from 2009: liquids detection systems, security scanners, trace detection, metal detection, cabin baggage x-ray systems, and walk-through metal detection systems. When you look at the whole picture, we currently have nearly 700 configurations on the CEP equipment list that meet ECAC/EU performance standards. That’s a huge number across those seven categories of equipment. And they are available for Member States to approve for use, and for airports – as the users of equipment in those countries – to pick from. They have access to a list of equipment and, depending on their budget, operational requirements and infrastructure, they can choose from it knowing the equipment will meet the requirements of their country’s national authority.

Another key achievement is that we are flexible and move with the times. Standards and testing methodologies have changed over time to address new threats. And bringing online those six other categories of equipment shows we take into account the market as well.

**Two new categories of equipment are going to be deployed. They have been approved now and will be tested this year. Can you tell us a bit more about that?**

We have two new categories of equipment: explosive vapour detection (EVD) and APIDS (Automated Prohibited Item Detection Systems). Testing for both are coming online this year, with APIDS testing starting in the next few months in the UK.

APIDS is really interesting because we are looking at being able to do more with the equipment that is deployed at airports – use of artificial intelligence, machine learning, better algorithms. We are also looking at new standards for explosive detection systems for cabin baggage (EDSCB) – the new standard C4 – and how all of these link together.

Another big focus for us over the next few years is to ensure the CEP is reliable. We have to sustain the process and by that, I mean we have to move with the times, bring in new categories of equipment, and look at how we do testing so we can ensure the outputs of the CEP are reliable.





## We want to work with ECAC Member States who are not currently part of the process to bring them on board, expanding the number of CEP test centres.

One of the big issues for us of course is the capacity we have within the CEP. We want to work with ECAC Member States who are not currently part of the process to bring them on board, expanding the number of CEP test centres. This means that not only will the CEP be more robust because we will have more members involved, but we will also have more capacity for testing. When we then bring in new categories of equipment, we can adjust our testing approach more easily and respond to that faster. This is key as technological developments – and we see this outside of security as well – are happening faster and faster.

We are starting to think about things like open architecture, where the hardware from one manufacturer but the software from another – including universities – might be used. Some academic groups are doing fascinating things with software. But how we test these systems will be very different to how we are doing testing now. What about if you have combinations of systems, or a system coupled with another one – a systems-of-systems approach – how do we approach that within the testing process? So there are big challenges ahead for the CEP over the next three to five years – but also, of course opportunities.

**I understand you have also adopted a roadmap for the benefit of all ECAC Member States, which describes the direction and the priorities for the next five years?**

Yes, that's correct. The roadmap is built around those points mentioned earlier. There are three principles: reliability, sustainability and being transparent (as much as we can be) with all our stakeholders. And three core outcomes: improving the CEP's outputs, improving the CEP's processes, and increasing capacity. Under those six items – three principles and three outcomes – we have identified the key high, medium and low priorities for the next three years, which will ultimately be the foundation of ensuring that the CEP is reliable, sustainable and transparent moving forward – hopefully for another 15 years or longer.

**I think the system is there to last because it does bring a lot to ECAC Member States, and to aviation in general, providing better security for all travelling citizens. I believe it is an important contribution from the contributing authorities to the wider community.**

Yes. One of the key points I always consider – and I am not sure if it is an ECAC security goal but I have always viewed it as one – is the aim to improve aviation security globally. The CEP is really the lynch pin of that effort. That is why the equipment lists are publicly accessible, we have agreements with a number of non-ECAC Member States to share extra information when needed to support their approvals, and we can be contacted by any ECAC Member State, non-ECAC Member States, manufacturers or airports for more information.

**Before we close, is there anything else that you would like to share about the CEP and your experience as chair of the management group since the last year?**

Being chair of the management group is a huge opportunity. Coordination is needed across a number of stakeholders: ECAC's 44 Member States, manufacturers, and airports as end-users. The CEP is the largest evaluation programme – I believe in the world – and many people rely on it, so ensuring that it functions well, how it needs to, and that it delivers, is extremely rewarding. It is sometimes a difficult task, but it is very much a rewarding one. ●

**Alastair McIntosh** is the head of Research, Analysis and Development at the Department for Transport in the United Kingdom. Over the last 15 years, his career has focused on the application of science and technology to defence and security with his current teams delivering the evidence, advice and capabilities that ensure the transport network is secure. He holds a PhD and master's in chemistry and is a Fellow of the Royal Society of Chemistry.



If you would like more information on the CEP, visit the ECAC website:

<https://www.ecac-ceac.org/activities/security/common-evaluation-process-cep-of-security-equipment>



## News from ECAC and JAA TO:

- ECAC Spotlight
- ECAC in brief
- JAA TO

# ECAC Guidance Material Task Force

## WHAT IS THE GMTF? WHAT ARE THE GMTF'S OBJECTIVES?

The ECAC Guidance Material Task Force, which we know as "the GMTF", is a group formed of ECAC Member State, observer State and industry nominees. Nominations are accepted on the basis of experience, competency and valid security clearance to ensure that they can develop for ECAC Member States the best guidance material on any aspect of aviation security.

Delivering guidance material is the reason the GMTF exists. It provides a unique space, where authorities and industry engage openly about the issues we face. We have a common objective: to ensure that Member States have the best advice for safeguarding civil aviation against acts of unlawful interference.

## WHAT TOPICS IS THE GROUP CURRENTLY FOCUSING ON?

2022 was our best year ever!

The Guidance Material Task Force has been on a journey to reform how it works and to ensure that Member States have the best guidance available for the implementation of harmonised aviation security measures.

The journey started in 2019 with an objective analysis of our work, including what we liked about the task force, what we disliked, what was working, what was not. We also looked at why we participated in the task force, the rationale we used with our respective hierarchies to justify the cost of participation. Finally, we looked at what we valued.

What was most interesting about this exercise, was that despite the different backgrounds of the task force members, at its core was a shared understanding of the value of the GMTF. It was clear that we knew what we wanted to achieve together, and for Member States. But were improvements needed?

On this we also agreed – improvements certainly were needed. We wanted time to discuss aviation security issues and not just read the papers presented. We wanted to make valuable use of our time, make meetings meaningful, respect each other's time ... we had a list and started to make the small changes immediately.

We wanted to be proactive: today, all regulatory changes are evaluated and guidance is prioritised so that the guidance is ready for Member States when ECAC Doc 30, Part II – *Security amendments* are issued.

We wanted to make valuable use of our time: agendas are issued well in advance to maximise participation, particularly when visas are required for our members. We highlight a topic on the agenda to set time aside for a brainstorming discussion, where we will focus on drawing out key points we can use in our papers.

Not only does the GMTF work hard, it works really well.

## WHAT CHALLENGES DO YOU SEE ARISING IN THE FUTURE?

Not so rosy, however, is the ongoing challenge of COVID on available budgets, resulting in limits on the number of in-person meetings. The GMTF is struggling with this – knowing that we can be more productive in two days together than the equivalent time spent online. We cannot engage in discussions on matters that are security sensitive, as we do not have the tools to ensure this information can be shared. Our new members have a particularly difficult challenge to work in a team having never met their GMTF colleagues in person.

While we are using best practices as we work online, there is still a sense that our in-person meetings are more effective. Even meeting twice each year (and not three times as was the case pre-COVID), would make a significant difference to the quality of the engagement and content if in-person meetings were the norm. In person, we achieve not only our work programme but also form the relationships we rely on for a second, trusted opinion or if we want a "sounding board" for an issue we are dealing with.

## interview with



**ELEANOR TRAVERS**

Aviation Security Manager,  
Irish Aviation Authority

We have a  
common objective:  
to ensure that  
Member States  
have the best  
advice for  
safeguarding civil  
aviation against  
acts of unlawful  
interference.





Some of the GMTF members during a break at the 56<sup>th</sup> meeting of the group in Paris, September 2022

### WHAT MAIN CHALLENGES FOR ECAC MEMBER STATES DO YOU SEE EMERGING/ BEING DISCUSSED BY THE GROUP AT FUTURE MEETINGS?

A key challenge is membership. In 2022, fifteen Member States participated in the GMTF, two of whom participated on an ad hoc basis. We would like to promote more engagement with GMTF as the measure of our effectiveness is determined by our “customer”, ECAC Member States. If we are not meeting your needs, it is difficult for us to know that without feedback. We are thankful to the ECAC Security Forum chair, Carla Pinto, for making time on the Security Forum agenda where GMTF can update and report on its work. However, we need more questions from the Security Forum and ideally more contributors within the GMTF to ensure guidance is not dominated by any particular interest group or biased towards a level of implementation applicable only to the few.

We know from experience that if one of us has a problem, we all have that problem. The GMTF is working to ensure that if we know how to address that problem, we should all know how to address that problem. Everyone’s voice and experience matters – finding a way to ensure it is heard and available is key to our future success.

### SOME FINAL WORDS?

2023 and 2024 will see the ECAC GMTF strategy realised. The achievements include moving the GMTF work programme from reactive to proactive by making sure guidance, such as best practices for the implementation of Automated Prohibited Items Detections Software (APIIDS), is available to Member States as the ECAC Doc 30, Part II — *Security* revisions are issued. It will also mean that all ECAC guidance material is within a five-year revision programme, ensuring Member States have the latest and best information available for aviation security harmonisation in the region. We are also ensuring that innovation remains at the heart of our thinking and approach with at least 20% of papers addressing guidance material on new topics not previously available.

This work is only possible with the great team that is the GMTF. Our leadership partnership – Ireland, Türkiye and the ECAC Secretariat – together with the committed professionals that engage wholeheartedly with a demanding work programme, and turn up to support each other – is ECAC harmonisation in practice. In today’s aviation security environment, it is *that* togetherness that is most needed – all of us focused on the core objective of safeguarding civil aviation from acts of unlawful interference. ●

“We would like to promote more engagement with GMTF.”

**Eleanor Travers** leads the Aviation Security Division in the Irish Aviation Authority, which is the appropriate authority in Ireland for the purposes of EC Regulation 300/2008. Eleanor has worked in aviation throughout her career, initially in airport operations and latterly in aviation security. She worked at international level with ECAC in Paris before returning to Dublin to work for the authority. The authority’s Aviation Security Division is responsible for processing approvals, conducting compliance monitoring, certifying personnel and coordinating aviation security matters with more than 400 regulated entities. She is currently chair of ECAC’s Guidance Material Task Force and is committed to promoting information and experience exchanges that improve the effectiveness of the national and global aviation security system.



Directors General of Civil Aviation gather for their 159<sup>th</sup> meeting.

## Directors General review 2022 activities and future priorities at end-of-year meeting

PARIS, 7 DECEMBER 2022

**D**irectors General of Civil Aviation gathered for their 159<sup>th</sup> meeting (DGCA/159) to analyse the main outcomes of the 41<sup>st</sup> ICAO Assembly, to discuss the preparations for the ICAO Council elections in 2025, to hear updates on recent European developments, and to review the status of implementation of ECAC's activities in the current year and the work priorities for the next year in the following domains: external relations, safety and accident investigations, unmanned aircraft systems (UAS), aviation security, environment (including capacity-building activities), facilitation, economics, legal, communication, and diversity in civil aviation.

ECAC President Alessio Quaranta presented ECAC's activities on external relations, highlighting the outreach activities and relations with key international partners and sister regional organisations (ACAO, AFCAC, LACAC). The active involvement of observers (Australia, Canada, Israel, New Zealand, Singapore, United States) in various ECAC groups, especially on aviation security matters, was also mentioned.

Zdeněk Jelínek (DGCA Czech Republic) provided an update on the main achievements of the Czech Presidency of the Council of the European Union, focusing on activities related to aviation (e.g. ReFuel EU Aviation, CORSIA, EU emissions trading system (ETS) rules, work on a technical level on transport connectivity, and coordination during ICAO meetings). Gunnar Ljungberg (DGCA Sweden) gave a

presentation on the priorities for the Swedish Presidency of the Council of the European Union in the first semester of 2023.

Jeremie Teahan (EASA) briefed Directors General on the latest air traffic management regulatory and development activities and the European Aviation Environmental Report (EAER) published by EASA every three years. He also briefly presented the Annual Safety Review 2022.

EUROCONTROL Director General, Eamonn Brennan, gave an update on the performance of the Network, including traffic volumes in 2022 and previsions for the evolution of air traffic in 2023. He also announced that the solidarity funds to support Member States affected by the war in Ukraine had been approved, and the process for participation had been launched, with an establishment of funds effective on 15 December 2022.

The ECAC President thanked Mr Brennan for the continuous and valuable help and support offered to ECAC, and his commitment and determination to support European aviation no matter how many challenges were encountered along the way.

Directors General also expressed their appreciation and gratitude, and thanked Mr Brennan for his leadership, friendship and assistance provided to ECAC in the past years. They wished him the best in his future endeavours. ●

We must find practical ways through common solutions to support the industry in its recovery from the crisis and in the new challenges it faces.



## Directors General convene in Paris to examine the aviation sector as it emerges from the crisis

PARIS, 6 DECEMBER 2022

The latest session of the ECAC Forum of Directors General (FORUM/15) took place in Paris. This year's programme examined the aviation sector as it makes its way out of the crisis.

Over 90 participants and speakers from 34 ECAC Member States, the European Commission, EASA, ICAO, IATA, ACI EUROPE, Lot Polish Airlines, Leiden University, AerCap, Royal Schiphol Group and the United States' Federal Aviation Administration joined the session in person.

Opening the Forum, David McMillan, former EUROCONTROL Director General and former United Kingdom Director General for Civil Aviation, explored 2022 aviation trends of increased traffic that were dampened by service disruption and specific challenges faced by some stakeholders.

The first session, moderated by Elisabeth Landrichter, DGCA Austria and ECAC Focal Point for Unmanned Aircraft Systems, further explored 2022 trends and the root causes within and external to the system. The Forum recognised that the industry is facing new challenges as it continues towards recovery and plans for the future. Both industry and regulators must learn from the experiences of the pandemic and summer 2022 events. There are lessons particularly on the importance of enhanced cooperation and transparency.

Piotr Samson, DGCA Poland and ECAC Focal Point for Safety, moderated the second session of the Forum on the aeropolitical landscape in the context of ICAO and the Chicago Convention framework. The Forum condemned recent breaches and urged States to stand together behind international law for fair and consistent responses to current and future exceptional events. It was agreed, however, that the current aviation sector has undergone significant change since 2019, resulting in new pressures in some areas and justifying review of the current aviation framework.

The last session, moderated by Tânia Cardoso Simões, President of the Board of Directors of ANAC (Portugal), examined what is needed for the sector to achieve long-term sustainability and resilience. The Forum discussed the important roles that innovation and flexible processes play in supporting these aims. It looked at the impacts of new technology in the market – from newer aircraft systems to green propulsion aircraft types and digital analytical tools to enable predictive safety management systems. Forum participants agreed above all the vital need for effective regulation and enhanced cooperation to sustain the sector.

ECAC President, Alessio Quaranta, brought the Forum to a close by underlining the importance of finding practical ways through common solutions to support the industry in its recovery from the crisis and in the new challenges it faces. ●





## Snapshot of the 41<sup>st</sup> ICAO Assembly

MONTREAL, 27 SEPTEMBER - 7 OCTOBER

The 41<sup>st</sup> ICAO Assembly saw major advances on environment and other domains (aviation security, cyber security, safety and ATM, facilitation, economics), against the background of extended discussions, re-timetabling of meetings and news-worthy decisions.

The Assembly, in an historic decision, adopted a collective long-term aspirational goal (LTAG) of net-zero carbon emissions by 2050. It also completed the first review of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) with a baseline reflecting the original ambitions of the scheme, with revised percentages for sectoral and individual growth factors that were acceptable to Europe.

All eight European candidates for the ICAO Council (Austria – representing the ABIS group, France, Germany, Iceland – representing NORDICAO, Italy, Romania – representing CERG, Spain and the United Kingdom) were elected.

Three ICAO Council papers on breaches of the Chicago Convention by the Russian Federation, Belarus and North Korea, to which European members of the Council had contributed greatly, were agreed. European ambitions on security, facilitation, safety and ATM, and economics were achieved through the normal coordination process, with participation

not only from those in Montreal but also experts in their capitals participating remotely. Cyber security became a coordinated domain in its own right for the first time.

In all, 18 working papers across the full range of domains were presented by European States and organisations. Two European Directors General of Civil Aviation were elected as officers of the Assembly – Raúl Medina Caballero (Spain) as chair of the Technical Commission, and Rannia Leontaridi (United Kingdom) as second vice-president of the Assembly – with Elisabeth Landrichter (Austria) also serving as first vice-chair of the Economic Commission and Susanna Metsälampi (Finland) as vice-chair of the Legal Commission.

The Assembly was also a good opportunity for outreach activities. The ECAC President, Alessio Quaranta, and the ECAC Executive Secretary, Patricia Reverdy, had bilateral meetings with the ICAO Council President, ICAO Secretary General, regional sister organisations ACAO, AFCAC and LACAC, and international Partner States such as the Republic of Korea, Saudi Arabia and Singapore. The long-standing cooperation with ECAC partners was re-confirmed, and joint activities for the next triennium were discussed for a sustainable development of international civil aviation. ●

**The Assembly adopted a collective long-term aspirational goal (LTAG) of net-zero carbon emissions by 2050.**

## News from the ECAC Secretariat

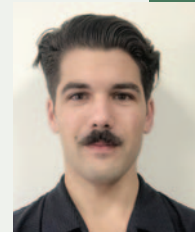


**CHARLOTTE LUND** joined the ECAC CASE II Project team as an aviation security specialist on 1 October 2022. She holds degrees in communications and marketing and has 16 years of experience in aviation security at Copenhagen Airport with a focus on regulations, training and education. Before joining ECAC, Charlotte held a security specialist position for the Danish National Police.



**KLEJDA DERVISHAJ** joined the ECAC CASE II Project team in October 2022 as a financial and administrative assistant after several years of professional experience in Albania in relevant roles in a financial institution and an international services company.

**JULIAN LOVEKIN** joined the CASE II Project team as an administrative assistant on 1 October 2022. Originally from Toronto, Canada, Julian completed his undergraduate studies in history and English literature at McGill University in Montreal, and his postgraduate degree in international history at the London School of Economics.



**ANGELA LYNCH** joined the ECAC Secretariat on 1 December 2022 as a policy coordinator covering economics, facilitation, legal issues and unmanned aircraft systems (UAS) after six years at the United Kingdom Civil Aviation Authority in its Strategy and Policy Department. Prior to that, Angela worked on international financial services policy and inward investment. At the UK CAA she developed experience of the aviation sector from a regulatory perspective, working most recently in innovation policy covering developments in electric vertical take-off and landing (eVTOL) aircraft and advanced air mobility operations.



## calendar

### MARCH

- 8-9 | 52<sup>nd</sup> meeting of the Training Task Force (TrTF/52), online
- 9 | 3<sup>rd</sup> ECAC Workshop on Sustainable Aviation Fuels (ENV-SAF-WKSHP/3), online
- 9 | 55<sup>th</sup> meeting of the Facilitation Sub-Group on Immigration (FAL-IMMIGRAT-SG/55), online
- 23 | 8<sup>th</sup> meeting of the Network of Chief Economists (NCE/8), Paris
- 23 | 59<sup>th</sup> meeting of the European Aviation and Environment Working Group (EAEG/59), online
- 24 | 15<sup>th</sup> meeting of the Economic Working Group (ECO/15), Paris
- 29 | 17<sup>th</sup> Familiarisation webinar on basic knowledge on aviation and the environment (ENV-FAMWEB/17), online
- 30 | 46<sup>th</sup> meeting of the Legal Task Force (LEGTF/46), online

### APRIL

- 4 | 197<sup>th</sup> meeting of the Coordinating Committee (CC/197), Paris
- 5-6 | 38<sup>th</sup> meeting of the Security Forum (SF/38), online
- 12-13 | ECAC Certified Aviation Security Auditors Recurrent Training and Recertification, Paris
- 13 | 65<sup>th</sup> meeting of the Facilitation Working Group (FAL/65), Paris
- 18-19 | Workshop on screener recruitment, training and certification in a post-COVID environment, Paris
- 19 | 18<sup>th</sup> Familiarisation webinar on basic knowledge on aviation and the environment (ENV-FAMWEB/18), online
- 25 | ACC workshop on harmonising the classification of serious incidents versus incidents, Bratislava
- 26-27 | 58<sup>th</sup> meeting of the Guidance Material Task Force (GMTF/58), Paris/hybrid
- 26-27 | 46<sup>th</sup> meeting of the Study Group on Cyber Security in Civil Aviation (CYBER/46), Madrid

### MAY

- 11-12 | 53<sup>rd</sup> meeting of the Training Task Force (TrTF/53), Zurich/hybrid
- 17 | 19<sup>th</sup> Familiarisation webinar on basic knowledge on aviation and the environment (ENV-FAMWEB/19), online
- 23 | 160<sup>th</sup> meeting of Directors General of Civil Aviation (DGCA/160), Paris

### Editorial

Dear readers of ECAC News,

Since flying began, safety and security have been the main components in organised global air transport, and security-related issues nowadays inform a variety of preventive measures summarised in Annex 17 of the International Civil Aviation Organization's (ICAO) Chicago Convention.

Globally interconnected supply chains, the steadily increasing air freight and air passenger volume (pre-COVID), unforeseen global events (COVID, war) and rapidly, ever-changing technology (such as artificial intelligence, internet of things (IoT)) put States, regulators and operators to test and should remind all stakeholders not to lose focus of security.

Because security is a dynamic discipline on how to safeguard the industry against acts of unlawful interference and evolving threats, it requires adaptive security/risk management, collaboration, security assurance, regulatory frameworks, and training and capacity building. Organisations that strengthen their Security Management Systems (SeMS) and foster security cultures create positive environments that are company assets and vital to any organisation's viability.

Aviation security is everyone's responsibility, a holistic approach that involves minimising risk through leadership, threat assessment, resource management and human capability. It is with pride that the JAA Training Organisation (JAA TO), as a Dutch-recognised national aviation security training centre, facilitates aviation security-related training and workshops in support of ICAO Standards and Recommended Practices (SARPs) and reaffirms that aviation security should be treated with the highest priority by ICAO and its Member States (see GAsEP – Global Aviation Security Plan).

In terms of raising awareness and promoting capacity building for global security practices, JAA TO avails of a pool of its own resources of subject-matter-experts (SMEs), cyber security, SeMS, airport security training courses and the ICAO STP (Standardized Training Package): Unruly Passengers. On the local, organisational level these are some of the puzzle pieces coming together for an overall safer and more secure air transport system.

Read below some recent JAA TO news and milestones related to aviation security, dangerous goods training and more.

I hope you enjoy reading this issue of ECAC News. ●



**PAULA V. DE ALMEIDA**  
JAA TO Director

### JAA TO receives IATA Dangerous Goods recognition



In August 2022, the International Air Transport Association (IATA) accredited JAA TO as a Competency-based Training and Assessment (CBTA) Centre of Excellence. With this status achievement, JAA TO is the first training organisation in the Netherlands to receive the CBTA Excellence accreditation by IATA.

This prestigious accreditation confirms that JAA TO's dangerous goods training courses are not only benchmarked against and meet IATA's Dangerous Goods Regulations (DGR) training provisions, it also attests that JAA TO's training design and development methodology and best practices comply with IATA's DGR guidelines for the development of CBTA for dangerous goods in accordance with the new ICAO and IATA CBTA requirements that came into effect on 1 January 2023.

The IATA CBTA Excellence recognition is the highest level of the three accreditations given to organisations offering solutions and services to the industry for the development of CBTA for dangerous goods in accordance with IATA's DGR - Appendix H.5.

Furthermore, JAA TO has completed the Dutch authorities' (Ministry of Infrastructure and Water Management) process to become a recognised training institution, providing training and conducting examinations required by organisations to obtain a certificate to transport dangerous goods by air for both "General" and "Radioactive" fields.

During ICAO's 41<sup>st</sup> Assembly in Montreal, JAA TO's CEO and business strategist and relationship manager met with Laurent Delarue, Director IATA Certifications, to proudly receive the official certificate. ●



## JAA TO interviews with SMEs on aviation security training



Aviation remains a high-value target. And while security incidents have a huge impact on public consciousness and perception, industry stakeholders are encouraged not to turn a blind eye when it comes to prevention and capacity building. Today, threats can be complex and changing in nature, motives and acting perpetrators, ranging from terrorism, conflict zones and cyber attacks to insider threats, unruly passengers and State/non-State actors. In support of ICAO SARPs, JAA TO published interviews with its security SMEs talking about threat perception, first lines of defence and leadership-driven security culture.

Aviation increasingly relies on automated systems, deeming human skill as obsolete. Such paradox of automation exposes increasing cyber vulnerabilities in aviation, making a first line of defence through capacity building and training of personnel even more important. Read the interview at <https://jaato.com/news/cyber/>.

Leadership-driven security culture helps teams understand the deeper reasons and benefits of strong security management systems. Such positive reinforcements create feedback loops that inform future risk/threat management. Read the interview at <https://jaato.com/news/avsec/>. ●



## JAA TO at the 71<sup>st</sup> Special meeting of ECAC Directors General

In August 2022, the European Civil Aviation Conference (ECAC) Directors General met in Sorrento for their 71<sup>st</sup> Special meeting, hosted by the Italian Civil Aviation Authority (ENAC). As the associated body of ECAC, JAA TO was represented by CEO, Paula V. de Almeida, and business strategist and relationship manager, Eric Schoonderwoerd.

During the meeting, JAA TO's CEO announced the 3<sup>rd</sup> JAA TO High-Level Brainstorm Session, dedicated to the 44 ECAC Directors General, which provides a closed forum to discuss the topic of *emerging information security threats in aviation – navigating the upcoming challenges for oversight of the critical aeronautical information systems*. ●

## Preferential seats programme for ECAC Member State CAAs

In an exclusive effort to drive harmonisation and support ECAC's objectives and functions with regard to training and capacity building, JAA TO has activated a preferential approach for its listed training courses. The website can be found at <https://jaato-ecac.mailchimpsites.com/>, and by approaching JAA TO's customer service unit and referring to their privilege as an ECAC Member State CAA, preferential enrolment will be activated.

Responding to the high demand, JAA TO was able to facilitate three virtual classes on the *Introduction to Aviation Regulations* at maximum capacity, teaching over 90 ECAC Member State CAA professionals in 2022. Congratulations to all trainees! ●



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