

WINTER 2019

# ECACNEWS #68

European Civil Aviation Conference Magazine



## SUSTAINABLE AVIATION

*Managing growth*



# CONTENTS

- 1** EDITORIAL  
Overcoming the aviation capacity tipping point  
*Ingrid Cherfils*

## SETTING THE SCENE

- 3** Challenges to growth: short and mid-term measures to address the European ATM capacity gap  
*Joe Sultana*
- 8** Aviation growth: get better at self-promotion  
*Jonathan Wober*
- 13** Sustaining aviation growth: an EC perspective on the opportunities and challenges ahead in the aviation sector  
*Flor Diaz Pulido*

## MEMBER STATES' PERSPECTIVES

- 16** A regulator's perspective – safety in Portugal  
*Luis Ribeiro*
- 20** Solidarity Airport: the future of transport in the CEE region  
*Michal Witkowski*
- 23** Managing security in a complex and fast-moving aviation industry  
*Guðjón Atlason*

## INDUSTRY PERSPECTIVES

- 30** Managing passenger growth: a Turkish perspective on security  
*Mansur Günes*
- 33** Sustaining aviation benefits beyond borders  
*Michael Gill*

## NEWS FROM ECAC & JAA TO

- 37** ECAC in brief
- 42** EaP/CA in brief
- 43** News from the JAA Training Organisation (JAA TO)

### ECACNEWS

#68 – Winter 2019

Publication Director  
Patricia Reverdy

Editorial Committee  
Patricia Reverdy, Gabrielle Hubler

Editor  
Gabrielle Hubler  
ghubler@ecac-ceac.org

Designer  
Bernard Artal Graphisme  
Cover: © Iaralova - AdobeStock  
Ph: © CEAC

ECAC News welcomes feedback and content ideas from interested parties.

Subscription and distribution requests should be made to  
info@ecac-ceac.org

*The opinions printed in ECAC News are those of the authors alone and do not necessarily reflect the opinions of ECAC or its Member States.*

Printed by Imprimerie Peau.

Follow ECAC on  and visit our website [www.ecac-ceac.org](http://www.ecac-ceac.org)

## Overcoming the aviation capacity tipping point

**Ingrid Cherfils**  
ECAC President



The upward trend identified in the 2018 EUROCONTROL report *Challenges of growth* was confirmed by the most recent figures for the full year: traffic over the continent increased by 3.8% compared with 2017. It means all-time records of 11 million flights... for a total of 19.1 million minutes of en route delays. That's 105% more than in 2017 – the equivalent of over 36 years of delay suffered by airlines and passengers in just one year.

Forecasts show no sign of slowing down. On the contrary, by 2040 16.2 million flights will be operated in the ECAC region and 1.5 million flights – that is 8% of the demand and roughly 160 million people – will not be accommodated.

These statistics do set the reality of one of the biggest aviation challenges today: traffic is growing tremendously and if its hindering factors remain untackled, the achievements and opportunities of our sector will be critically jeopardised (see pages 3 to 14, *Setting the scene*).

As regulators, we are committed to ensuring and continuously furthering levels of safety and security, while the number of passengers continues its upward trend (see pages 15 to 28, *Member States*).

Other critical issues weighing on aviation growth are the environmental requirements – noise, air quality, CO<sub>2</sub> emissions – of a rapidly expanding global aviation industry. Current operational trends show that the environmental impacts resulting from aircraft noise and aviation emissions will be THE major constraints weighing on the sector in the future, even with adequate infrastructures.

Our sector also has to incorporate and deal with emerging trends and with them, up-side risks. Let me mention here the multiplication of Remotely Piloted Aircraft Systems in the controlled airspace, cyber safety and security threats, supersonic aircraft and lack of aviation professionals – to name but a few.

New challenges are always on the horizon. If aviation is to grow and continue to benefit our societies and economies, it will require a collaborative approach: government policies and regulatory environments that encourage research and development, airlines operating quieter and cleaner fleets, airport operators upgrading infrastructures, air navigation service providers implementing effective procedures.

Aviation has become an essential element of our economies and societies in the last 60 years. Let us remember that aviation succeeded in its first century because it constantly met the challenges of innovative thinking: flying faster, safer, quieter and cleaner. Now, standing at the tipping point of aviation history, we should be confident our sector will continue – through cooperation and innovation – to invent the ways to shape its own future.



## SETTING THE SCENE

- › Challenges to growth: short and mid-term measures to address the European ATM capacity gap
- › Aviation growth: get better at self-promotion
- › Sustaining aviation growth: an EC perspective on the opportunities and challenges ahead in the aviation sector

# Challenges to growth: short and mid-term measures to address the European ATM capacity gap

Joe Sultana

Director of the Network Management Directorate, EUROCONTROL



**2018 was a critical year for air traffic management (ATM) in Europe. There was a significant spike in delays caused by a number of factors, including a lack of controllers to open the needed air traffic control sectors, disruptive convective weather and frequent industrial action by controllers. And all of this comes on the back of ever-increasing traffic.**

There were over 11 million flights in the network in 2018, an increase of 3.8% on 2017. 7 September 2018 saw the highest-ever number of flights on a single day – 37 101. The traffic increase was within the low-high range of the forecast, albeit close to the high end. Of the top 15 traffic flows, accounting for 50% of flights, only one was above the forecast range. However, the volatility of tourism traffic flows to Southeast Europe, in particular Turkey and also Greece, resulted in higher-than-expected peaks in traffic flows from Northwest Europe and vice versa. This has led to a number of overflights being above expectations in a number of States in Central and Eastern Europe, and their ability to handle this higher-than-forecast traffic is commendable.

The same cannot be said about two States in Western Europe: France and Germany. In 2018, the number of controllers available to handle the increased traffic in some of their air traffic control centres was less than in 2017.

The total en-route air traffic flow management (ATFM) delay for the network was more than 19 million minutes, the equivalent of 1.73 minutes per flight and double the 2017 figure. The Single European Sky performance target, in terms of average delay of minutes per flight, is 0.5 and it is therefore not surprising that action has been requested to mitigate this lack of capacity and

take measures to remedy the situation as much as possible for the summers of 2019 and 2020.

## ► Short-term measures (2019-2020)

EUROCONTROL, as Network Manager, drafted an action plan with concrete short-term (2019-2020) measures, addressing the capacity shortages by mitigation actions and adding measures for the potential creation of additional capacity. The plan was endorsed by all ATM stakeholders and received the political support of the European Commission and EU and EUROCONTROL Member States. The plan contains the following measures:

- **eNM/S19 (“Enhanced NM/ANSPs Network Measures for summer 2019”):** Preparation of strategic network ATFM measures (i.e. reroutings) to be applicable during summer 2019 in a balanced approach between capacity and horizontal and vertical flight efficiency.
- **Network CDM process for management of en-route weather (2019):** Preparation of new network procedures for the management of en-route weather with the definition of roles and responsibilities and with a more Network-Manager-orientated decision-making on en-route weather management.

- **Harmonisation of Flexible Use of Airspace (FUA) application and enhanced FUA procedures (2019):**

Harmonised FUA application in the Functional Airspace Block Europe Central (FABEC) area and development of enhanced FUA procedures to address availability and network-synchronised utilisation of civil/military airspace.

- **Network cooperative decision-making process to optimise ATFM regulations (2019):**

Preparation of new network procedures for the application of ATFM regulations with the definition of roles and responsibilities and with a more NM-orientated decision-making on the application of ATFM regulations.

- **Addressing structural airspace bottlenecks (2019/2020):**

Creation of three major seamless airspace re-sectorisation projects to be developed on the basis of operational requirements (45 problem areas stretching all over the European network and excluding only the far north, west and southern parts).

- **Preparation of a six-year Network Operations Plan 2019-2024, including specific sector-opening schemes and rostering (2019 emphasis).**

The implementation of the plan already commenced at the end of 2018 and will continue with several lines of action in quarters one and two of 2019.

## Challenges to growth: short and mid-term measures to address the European ATM capacity gap

The increase in delays in 2018 raises an even more fundamental question:

**“How will the European ATM system cope with air traffic in the next 20 years when all forecasts predict a period of sustained growth?”**

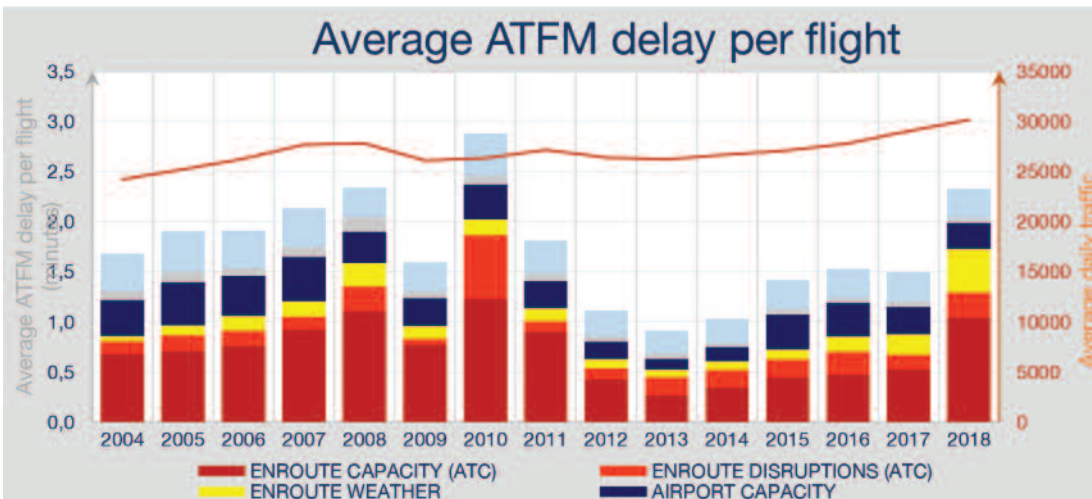
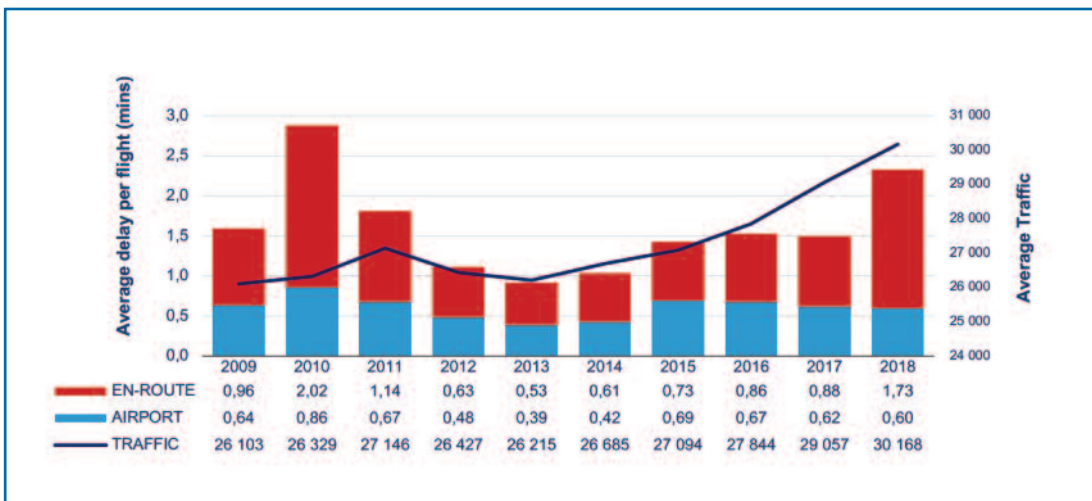
In the fifth *Challenges to Growth* study published in mid-2018, the long-term traffic growth is forecast to show substantial growth over the next 20 years, albeit more moderate than the historic growth of the last 20 years. An average of 1.9% increase per annum will mean 6.2 million more flights in the ECAC region by 2040 compared to 2017 (+53%).

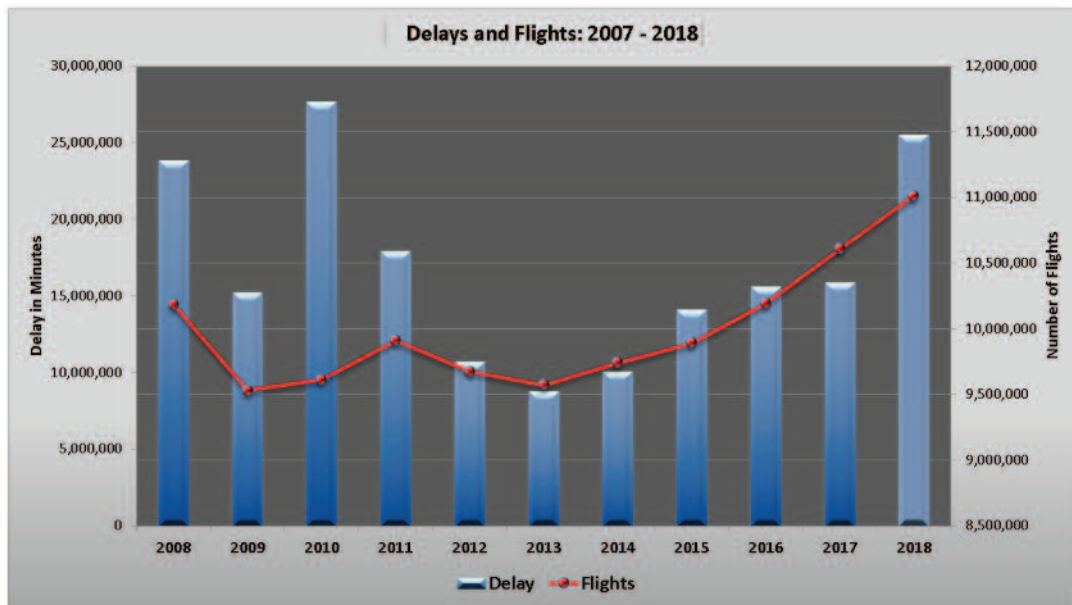
These numbers create a major challenge to aviation in general and ATM and airports in particular. As pointed out above, 2018 showed a rapid deterioration in

delays during the summer season linked to this growth in traffic. To handle these developments, the ATM industry will have to adapt to them and handle them safely, efficiently and at an economically acceptable cost. The problem of increasing delays is expected to last until at least 2021 based on the currently available information.

The capacity crunch in 2018 was not unexpected. Actually, 2013 was the last year that the delay figures were close to the Single European Sky target of 0.5 minutes per flight. Since then, the delivered capacity has not been able to match the increase in traffic, on average 3% per annum, and delays have increased. Strategic recruitment choices, unexpected shifts in demand and inefficient utilisation of staff in some parts of the network led to opening of fewer

sectors than planned in the network operations plan. The unreliability of the capacity plans in a few critical area control centres meant that no effective mitigation action was possible in advance. Network disruption due to strikes and en-route convective weather increased in the last five years. EUROCONTROL, as Network Manager, has been flagging these structural capacity shortages since 2015, pointing out that the air navigation service providers (ANSPs) need to adopt best practices and make radical changes to sector design, optimisation and other structural components of the ATM provision in Europe. The instruments available in the network management concept, however, were not sufficient to resolve the flagged issues at strategic level.





Network Manager  
nominated by  
the European Commission

Classification: TLP : Green

In the autumn of 2017, once the scale of the lack of capacity in key parts of the network was known, the Network Manager, in cooperation with 11 ANSPs, prepared and implemented mitigation plans reducing the demand in affected areas by more than 300 flights per day and strategically rerouting them into airspace that had some limited spare capacity. This was achieved by the use of measures like level-capping and of-floods to other control centres. The level of cooperation seen in this process was unprecedented. ANSPs, in the interest of the overall performance of the network, accepted more traffic in their airspace even when this meant that they were initially attributed delays as a result. Aircraft operators, while clearly unhappy with this lack of performance of the European ATM system, understood and supported the efforts to mitigate, and accepted slightly longer routes and less than optimum flight levels. These mitigation plans saved more than five million minutes of delay. The analysis of the effectiveness of the measures and the impact on

supporting ANSPs and aircraft operators took place in the last quarter of 2018 and improvements will be made when these measures are unavoidably reintroduced for summer 2019, as issues of the same magnitude are expected in 2019, driven mainly by a shortage of controllers. While urgent recruitment and training plans have been put into action by the relevant ANSPs, it will take three years or more from the start of recruitment to validation in the sector for this recruitment action to take effect around 2021 and 2022.

Having addressed the controller shortage, the underlying inefficiencies of the European aviation system will surface prominently. Today, we suffer from inefficient airspace sectorisation that is restricted by national borders. We have widely different levels of productivity across the 65 area control centres across the ECAC region. The functional airspace blocks have not contributed sufficiently and as expected to the system performance as yet. The pace of deployment of new technology, identified by the

SESAR research programme, is painfully slow and the extensive funding support made available by the European Commission has not been targeted to the performance needs of the overall European network. These structural weaknesses of the Single European Sky need to be addressed. Yes, the delays we see today will be brought back under control with additional staffing availability, but the continuous traffic growth and non-efficient Single European Sky will mean that the delays will return as of 2023 onwards and be even more pronounced for the remainder of the next decade.

### ► From tactical mitigation to strategic action - airspace for the future

Recognising the current capacity crunch is not a new problem and cannot be solved with the same approach as in the past, the European Commission, at the request of the European Parliament, has commissioned an airspace

## Challenges to growth: short and mid-term measures to address the European ATM capacity gap

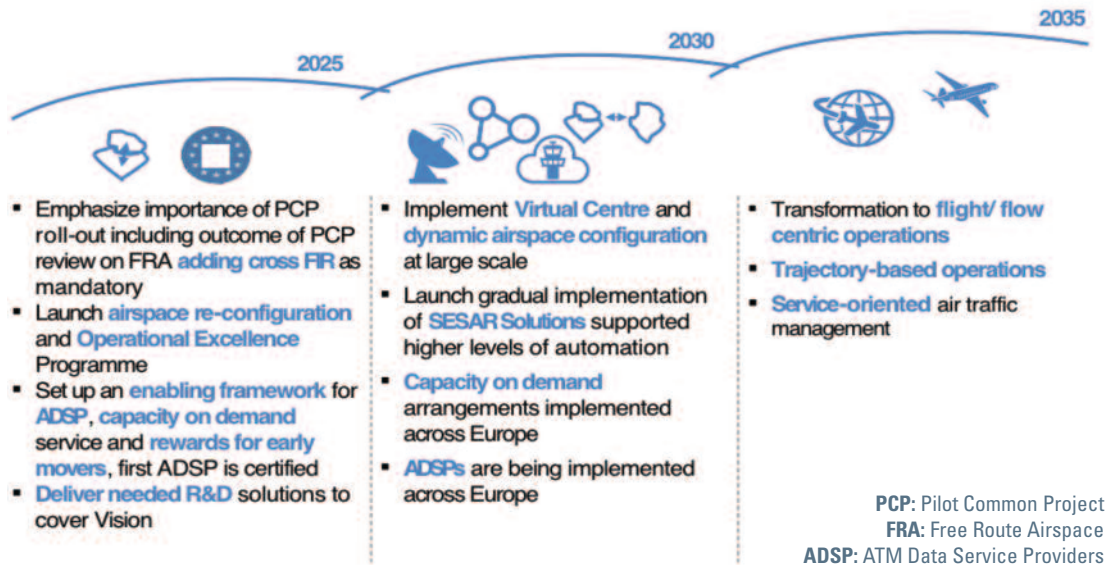
architecture study from the SESAR Joint Undertaking with the specific contribution of the Network Manager. The objective of the study is to develop and propose a future airspace architecture for the European airspace that will be robust enough to ensure the efficient, safe and seamless accommodation of all air traffic by 2035. By this it aims

to support further the implementation of the Single European Sky.

The study will propose an airspace architecture ensuring that optimisation of airspace is only according to operational needs and without undue regard for national borders. The study proposes a link between the airspace architecture and SESAR solutions on operations

and technology, which is considered the essential difference in the approach – optimised airspace supported by higher level of automation and common ATM data services.

A possible way forward through a five-year progressive transition is proposed below.



### Challenges to growth



The Airspace Architecture Study and other initiatives undertaken by European States and the European Commission are progressing well and there are good prospects that the implementation programme addressing the key deficiencies of the European aviation system will be put in place by the new Commission. However, these in themselves do not address the other structural deficiency facing European aviation in the next decades: airport capacity.

Looking further ahead, the *Challenges of Growth* studies aim to deliver the best-achievable information to support long-term plan-

ning for aviation in Europe. EUROCONTROL has previously published four *Challenges* studies – in 2001, 2004, 2008 and 2013. The just-completed fifth study, *Challenges of Growth 2018 (CG18)*, tackled the following question:

**“What are the challenges of growth for commercial aviation in Europe between now and 2040?”**

Recent variability in traffic has re-emphasised the need to consider a range of possible futures, in order to manage risks. After a stakeholder review, we have defined four scenarios, each describing a different future:

- *Global Growth*: strong global growth

with technology used to mitigate sustainability challenges.

- *Regulation and Growth* (most likely): moderate growth regulated to reconcile demand with environmental sustainability issues.
- *Happy Localism*: like *Regulation and Growth*, but with a fragile Europe increasingly, and contentedly, looking inwards for trade and travel.
- *Fragmenting World*: a world of increasing tensions and reduced globalisation.

The most likely scenario is *Regulation and Growth*. However, we see a number of long-term risks that would lead to higher growth, and thus we also give particular attention to *Global Growth*.

By 2040, traffic in Europe is expected to grow to just over 16 million flights in *Regulation and Growth*, and close to 20 million in *Global Growth*. This is a total growth of 53% (*Regulation and Growth*) and 84% (*Global Growth*) compared to 2017.



## Challenges to growth: short and mid-term measures to address the European ATM capacity gap

This is rather slower growth than before 2008. Indeed, over the 20 years before the economic crisis, the number of flights in Europe doubled from five million instrument flight rules (IFR) movements in 1988 to ten million in 2008. Overall, the future deceleration in growth is explained by slower rates of economic growth, increasing fuel prices and increasing congestion at airports.

We now collect airport capacity data around the clock, for operations as well as long-term studies like this one. After cutting back between 2008 and 2013, airports are expanding their capacity plans again, with 111 airports planning a 16% increase in capacity between them, or four million more runway movements. This growth is focused on the top 20 airports, which are planning growth of 28%, or 2.4 million runway movements.

These airport capacity expansion plans, even if they can be delivered, are not sufficient. Plans are better focused than they were in 2013, with more expansion where we predict more traffic growth. Even so, by 2040, there will be 1.5 million more flights in demand than can be accommodated, 9% of demand in *Regulation and Growth*. That is 160 million passengers unable to fly. The gap is spread across 17 States. In *Global Growth*, the gap is 3.7 million and 16% of demand.

Even with 1.5 million flights unaccommodated and therefore lost, the network remains highly congested. The number of 'Heathrow-like' airports operating near capacity for much of the day climbs from 6 in summer 2016 to 16 in 2040, or even 28 in *Global Growth*. We have modelled delays

from all causes, and find that in the summer, these would jump from 12 minutes to 20 minutes per flight in 2040. In particular, the number of flights delayed by one to two hours increases by a factor of seven.

Closing the capacity gap is a task for airports, providing more infrastructure, but also for airlines, regulators and others. Taking a cue from how industry has responded in the past, we modelled six different mitigations, apart from new runways. Of these mitigations, the most promising are the developments under SESAR Wave 1, which target busy airports at peak hours. These developments could reduce the most likely capacity gap by 28% in 2040, if they can be successfully deployed.

The climate is changing. Over the medium and long term, there will be changes to temperatures, to rain, snow, wind and storm patterns and in the sea level. This will affect aviation infrastructure, patterns of demand and daily operations. An updated and enlarged survey shows that the European aviation industry recognises that these challenges are coming. But there has been little change over the last five years in the proportion of organisations actually planning for adaptation to climate change impacts. This is a risk that needs further investigation.

There will be many more unmanned aircraft systems (UAS) or 'drones' by 2040. Most of these will operate outside current IFR airspace, but this will put pressure to cede parts of current controlled airspace. Within controlled airspace, 2017 saw about six flights/day and, by 2040, the main effect will be to

replace existing operations with 'optionally piloted' ones. On top of this transformation, we see further growth of about 100 flights/day.

### ► In summary

*Challenges to Growth 2018* sees three key challenges for 2040:

- Delivering current **airport capacity** plans is already a challenge, but they will fall 1.5 million flights short of demand. More is needed at airports in 17 different States.
- Even with 1.5 million flights lost to the capacity gap, a typical summer day in 2040 will have 16 airports as congested as Heathrow is now. That will push total **network delays** to an average of 20 minutes per flight. It will be a challenge to provide an adequate quality of service day in, day out in these circumstances.
- Climate change will damage aviation infrastructure, alter patterns of passenger demand, and lead to more disruption of daily operations. Industry recognises the need for **adaptation**, but only half of organisations have begun to plan.

Concerted efforts to improve the European Aviation System both in the air and on the ground are needed in the face of the projected growth in air traffic. The challenges are tough but the solutions are available if Europe puts aviation as a priority-enabler supporting European industry and citizens, and if it gives the political backing to the way ahead being developed. ■

In 1975, **Joe Sultana** graduated with an engineering degree from the University of Malta and joined the Air Traffic Services Unit in Malta. In 1982, he was appointed head of air traffic services in the Maltese Department of Civil Aviation. He became deputy director of civil aviation in 1984, responsible for the air traffic services organisation. Mr Sultana joined EUROCONTROL in 1991 as an airspace management expert coordinating airspace and navigation projects. From 1998 to 2002, he was EUROCONTROL's RVSM programme manager with successful implementation of RVSM in 41 States. In 2003, he led the Business Division Network Capacity. He later led the Airspace, Network Planning and Navigation Division. In 2008, Mr Sultana joined the Central Flow Management Unit as head of operations. In January 2009, he became deputy director CFMU responsible for network operations and information management. In 2011, Mr Sultana was promoted to director of the Agency as chief operating officer within the Directorate Network Management. Since July 2013, he has been the Director Network Manager responsible for fulfilling the role of the Network Manager established with the Single European Sky.



## Aviation growth: get better at self-promotion

**Jonathan Wober**

*Chief Financial Analyst, CAPA – Centre for Aviation*

Aviation is a growth industry, with all leading forecasters expecting this to remain the case into the longer-term future. As in the past, there are likely to be occasional, short-term interruptions to traffic growth. However, IATA forecasts a doubling of passenger numbers between 2017 and 2037, with considerable social and economic benefits arising from this growth. Nevertheless, there are a number of challenges both constraining, and resulting from, growth in the aviation industry.

This article summarises the main challenges faced by the industry and outlines areas of consideration for solutions to these challenges. It is based on a presentation by CAPA – Centre for Aviation to the ECAC Forum in Paris on 4 December 2018 under the title “The challenges of growth: what solutions for the future?”.

The challenges can be grouped into four broad categories: (1) infrastructure, (2) environment, (3) protectionism and (4) additional government-imposed burdens. Underpinning virtually all the solutions is the need for aviation to become much better at promoting its benefits to the public.

### Summary

- › Infrastructure challenges include physical, airspace and human resource constraints.
- › Environmental constraints are twofold: aviation has an impact on the environment and vice versa.
- › Protectionism includes limits on ownership and control and market access, isolationism and labour-vested interests.
- › Additional government-imposed burdens include aviation taxes, consumer rights regulation and visa restrictions.

### ► Infrastructure challenges: physical, airspace and human resource constraints

The challenges of infrastructure comprise three main areas, which are physical infrastructure, airspace and human resources.

Physical infrastructure challenges mainly focus on airport capacity constraints, but also include surface access.

The challenges of airspace relate to air traffic management, which includes both strategic considerations of the capacity needed and the constraints on growth resulting from operational issues such as air traffic control strikes.

Human resources may not always be thought of as infrastructure, but lack of sufficient staff numbers can be a considerable constraint on achieving growth.

### ► Physical infrastructure: solution considerations

#### A STRATEGIC VIEW FROM GOVERNMENTS AND SMOOTHER PLANNING APPROVAL

With regard to physical infrastructure needs, the solutions start with a more strategic long-term view from governments that sets the priorities for new capacity in terms of location, timing and participants.

This should allow for an earlier start to the consultation and planning process necessary in democratic societies that allows all interested parties to express their views and which often leads to lengthy delays.

Related to this is the need for government action towards achieving a smoother and faster planning approval process for aviation infrastructure.

**ATTRACTING PRIVATE SECTOR INVESTMENT**

A third area for consideration in seeking solutions to the physical infrastructure challenges is the need to attract private sector investment. Given the scale of the infrastructure need and related investment requirement, the public sector is unlikely to be willing or able to shoulder all of the financial burden.

However, attracting private capital requires designing a regulatory formula for access charges that treads a careful balance between providing investors with a suitable return on investment and providing a fair deal to those paying for the use of the infrastructure, i.e. airlines.

Too low a regulatory price cap could deter investors, while a price cap that is too high could choke off demand from airlines and deter the growth that the new infrastructure is designed to accommodate.

▶ **Airspace constraints: solution considerations**

**A MULTILATERAL APPROACH AND NEW TECHNOLOGY**

In the area of airspace management, solutions will come from a multilateral, collaborative approach involving cooperation between States and air navigation service providers.

In addition, the use of new technology and techniques to optimise airspace configuration are increasing the effective capacity of air traffic management. In Europe, this means continuing to drive through the initiatives undertaken within the Single European Sky project.

**MEASURES TO LIMIT AND MITIGATE AIR TRAFFIC CONTROL STRIKES**

Concerning the challenges and constraints on growth caused by air traffic control strikes, there is a need for measures to limit and mitigate the impact of such action. For example, the airline trade body

Airlines for Europe has proposed measures such as a commitment to go to third party arbitration prior to calling a strike and greater certainty over alternative airspace provision in the event of a strike.

▶ **Human resource constraints: e.g. tightening pilot supply**

The human resources challenges to aviation include concerns over the supply of sufficient numbers of pilots, engineers and air traffic controllers to meet the industry's growth needs.

Focusing on the global market for pilots, supply is tightening. According to flying training services provider CAE, in 2016 there were 19 000 new commercial airline pilots, a figure that had not changed appreciably for a number of years.

However, CAE forecasts an average annual need for 25 000 new airline pilots over the next ten years, while Airbus forecasts a need for 27 000 pa for 20 years and Boeing forecasts that 32 000 new pilots will be needed over the next 20 years.

Whichever forecast is taken, the future requirement for new pilots is a considerable step up from current supply rates.

▶ **Human resources challenge: the solutions are mainly market-based, with help from technology**

The solutions to the pilot shortage problem are likely mainly to be market-based. A tightening supply bids up pilot pay, which attracts more pilots, although there is likely to be a delay before demand and supply are in equilibrium.

In the meantime, developments in technology should help to improve the efficiency of pilot training and scheduling. In turn, this will increase the supply of newly trained pilots and increase the productivity of serving pilots.

In the longer term, technology may lead to a dramatic reduction in the expected demand for pilots. The technology broadly exists already to allow pilotless cockpits, although it is likely to be a long time for this idea to gain social, political and regulatory acceptability.

An interim step could involve single pilot cockpits, although that will also need time to be accepted by all stakeholders.



© Wavebreak Media Ltd - 123RF

“Targets are ambitious and aviation is one of the few industries to have a comprehensive set of climate change targets and a strategy to achieve them. Nevertheless, aviation is not included in the 2015 Paris Agreement and, as a very high profile sector, is vulnerable to accusations that it is not doing enough. **There is likely to be growing pressure on aviation to aim for net zero carbon emissions by 2050.**”

## ► Environmental constraints: aviation has an impact on the environment

There are two ways to think about the environmental challenges to aviation.

The first is aviation's impact on the environment and the challenges to growth resulting from the need to reduce this impact. This includes carbon dioxide and other greenhouse gas emissions contributing to climate change, in addition to air quality and noise impacts.

Greenhouse gas emissions is possibly the biggest environmental challenge to aviation, in spite of aviation's relatively small current contribution to carbon emissions, because of projected traffic growth.

### **AVIATION HAS A STRATEGY TO MITIGATE ITS IMPACT, BUT MAY HAVE TO GO FURTHER**

The airline industry, at the instigation of ATAG and IATA and under the auspices of ICAO, has devised a four-pillar strategy to tackle its climate change impact and to achieve its targets of 1.5% pa fuel efficiency improvements to 2020, carbon-neutral growth from 2020 and a halving of carbon emissions by 2050 relative to 2005 levels.

These targets are ambitious and aviation is one of the few industries to have a comprehensive set of climate change targets and a strategy to achieve them. Nevertheless, aviation is not included in the 2015 Paris Agreement and, as a very high profile sector, is vulnerable to accusations that it is not doing enough.

There is likely to be growing pressure on aviation to aim for net zero carbon emissions by 2050. The industry should adopt this more ambitious target before this pressure becomes irresistible.

The four pillars are operations, infrastructure, technology and a global market-based economic measure. Improvements in operations and infrastructure capacity will help to improve efficiency and reduce unnecessary fuel burn. To a large extent, solutions in these areas have been covered above.

### **TECHNOLOGY WILL BE KEY TO SOLVING THE ENVIRONMENTAL CHALLENGE**

In the area of technology, efforts are focusing on biofuels and new aircraft technology. The airline industry is increasing its trialling and use of biofuels, although large scale commercial production remains a challenge.

New aircraft technology, both in engines and airframes, is leading to almost continuous improvements in fuel efficiency (and in noise reduction), but a step change improvement in carbon emissions will require completely new propulsion systems, with electrical and hybrid power units a focus for the future.

There is still considerable work to be done in this field, particularly regarding the weight of electrical engines, but the industry is starting to demonstrate its ambitions in this direction. For example, Norway has set a target for all its domestic aviation to be electrically powered by 2040, and easyJet is developing a battery-powered aircraft with United States' start-up Wright Electric, targeted for short-haul flights by 2030.

In spite of the work being done, the challenge of finding technological solutions to aviation's impact on the environment is considerable. Nevertheless, it is likely to be the most important of the four pillars in the long term, particularly if a net zero carbon emissions target is introduced.

This means that technological solutions will need incentives from governments, whether in the form of subsidies, tax breaks, capital grants or other incentives.



**AVIATION'S MARKET-BASED MEASURE IS CORSIA**

The market-based measure is really about bridging the gap until technology can solve the long-term challenge. The measure adopted by ICAO is the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). The reporting phase for CORSIA is due to commence in 2019 and the first phase of implementation in 2021.

However, there are some concerns that CORSIA will not be globally adopted: in particular, China has expressed doubts. There is much detail still to be developed and agreed, but, for CORSIA to be effective, it needs to be global and, to avoid fragmentation and additional costs, the only economic measure.

► **Environmental constraints: the environment has an impact on aviation**

The second environmental challenge to aviation is the environment's impact on aviation. In particular, climate change is leading to a greater incidence of disruptive weather events leading to flight cancellations and this is an increasing challenge to growth.

Solutions in this area will require airlines, airports and other industry participants to plan better for the disruption and changing demand patterns resulting from climate change.

► **Protectionism includes ownership and control rules and isolationism**

The third area of challenge to aviation comes under the heading of protectionism.

This includes the archaic rules limiting foreign ownership and control of airlines and restricting market access on international routes under the bilateral system.

In addition, a slide towards isolationism, whether in air transport agreements, environmental agreements, or more widely in trade agreements, poses a challenge to economic growth and aviation.

IATA's most recent long-term traffic forecasts, published on 24 October 2018, provide an illustration of the potential benefits of liberalisation versus the negative impact of any increase in protectionism.

Covering the 20 years to 2037, IATA's base case forecasts an average growth rate in passenger numbers of 3.5% pa, supporting USD 5.5 trillion of GDP in 2037 (in 2016 prices), assuming no changes to current regulatory policy.

Under its 'maximum liberalisation' scenario, this growth would increase to 5.5% pa and support GDP of USD 7.6 trillion. However, its 'reverse globalisation' scenario forecasts growth slowing to a sluggish 2.4% pa and supporting only USD 4.6 trillion of GDP.

This is a challenge where individual aviation industry participants may have little influence, but the solution lies in industry-wide lobbying for full liberalisation of rules on ownership and control and on market access on a multilateral basis and for a commitment to international institutions and free trade.

## Aviation growth: get better at self-promotion



© dmitrydesigner - AdobeStock

### ► Protectionism also includes labour-vested interests

Also under the ‘protectionism’ heading is the challenge to aviation posed by labour-vested interests, for example scope clauses and mechanisms giving labour groups control over the growth of an airline’s fleet.

The solutions in this area are not straightforward, but start with clear communications and building a relationship of trust between management and labour groups.

In addition, there is a common union concern (particularly within the European Union and also in North Atlantic markets) that airlines often seek to arbitrage labour laws in a ‘race to the bottom’, seeking the jurisdiction most favourable to management’s goals.

To counter this, a more coordinated approach to labour law within the EU would contribute to finding solutions.

### ► Additional government-imposed burdens also challenge aviation

Further challenges to aviation include burdens imposed by governments such as aviation taxes, consumer rights regulation and travel barriers imposed by visa regimes.

Solutions in this area are simple, at least on paper: the removal of aviation taxes, the minimising of consumer rights regulation (and its equalising across different jurisdictions) and the lowering of visa hurdles.

### ► Aviation has an image problem

All of the solutions to these challenges of aviation involve regulatory change to at least some extent and regulatory change only comes from government policy. In democracies, government policy is set by politicians, who are elected by the public.

However, the public often has an ambivalent attitude towards aviation. Aviation is everyone’s ‘guilty secret’: everyone likes to fly, but nobody likes to admit it, particularly in the light of growing environmental concerns.

Aviation has an image problem.

### ► Aviation needs more self-confidence in its benefits

As a result, the mindset that will underpin an approach to seeking solutions to all of aviation’s challenges needs to change. The aviation industry needs to take responsibility for its own future and not blame regulators or governments for constraining growth.

Aviation needs to be much more self-confident about promoting the economic and social benefits of growth to the public. ■

**Jonathan Wober** joined CAPA in 2013 to lead its analytical coverage of European airlines and is now also responsible for developing financial analysis products. Previously, he spent 13 years as an equity research analyst covering airlines and airports for Société Générale, HSBC, Deutsche Bank and BAE Systems. He holds a bachelor’s degree in mathematics and physics from the University of Bristol and a master’s in business administration from London Business School.

# Sustaining aviation growth: an EC perspective on the opportunities and challenges ahead in the aviation sector



**Flor Diaz Pulido**

*Head of Unit for Aviation Policy, Directorate-General for Mobility and Transport, European Commission*

**I had the pleasure of moderating a discussion on sustainable growth in the aviation sector at the 11<sup>th</sup> ECAC Forum on 4 December 2018. At this session, we were provided with experiences of these challenges from Poland, Portugal and the United Kingdom. It was a lively discussion where it became clear that increasing capacity in the aviation sector - both in the air and on the ground - is the biggest challenge in aviation today and for the future. Equally important is the certainty that this increasing capacity, and thereby sustaining growth, should be done in a sustainable way for the benefit of the European citizens and the generations to come.**

With the winter break and the beginning of the New Year comes a time for introspection and good resolutions. It is a moment to reflect on both the past and the future, on the tasks and goals we didn't achieve or that are still in the making, and those we can count as having accomplished. Based on the outcome of this exercise, we make our equally mandatory resolutions for the year to come, hoping for a better result of our analysis in the repeated exercise at the end of the new year.

## ▶ A driver of economic growth... and so much more

The same thing can be done for the aviation sector. Looking back at 2018, we experienced another good year e.g. in terms of passenger traffic. International scheduled passenger traffic expressed in terms of revenue passenger kilometres grew by 6.4% in 2018. Europe recorded the second-highest growth at 6.7% and was the largest international market with a 37% share to the benefit of the European and global economy. There is absolutely no doubt that the aviation sector contributes vastly to the respective countries' gross domestic product and is vital to the continuous growth of the European economy.

Equally important is aviation's ability to foster regional development through better connectivity. This allows the benefits of the internal market to spread throughout the EU for the benefit of all the EU citizens. In this respect, aviation is not only a driver of growth but a driver of cohesion and integration. This is really the triumph of aviation: connecting citizens and regions, which were until very recently just distant points on the map and have now become new aviation routes, making not only Europe but the world smaller and more accessible, full of personal and economic possibilities.

## ▶ 2018, record year for delays

However, the many passengers in 2018 also marked a record high year for delays. For example, the average en-route delay doubled in 2018 compared to 2017. One in three flights was delayed for an average of 20 minutes. The many delays are undoubtedly linked to the capacity constraint in the air and on the ground. This is the negative aspect of an otherwise very positive backdrop and represents the biggest challenge in sustaining growth in the aviation sector today and in the future.

But just like for the New Year's resolutions, we should not simply accept the status quo. In facing challenges we need to look to the solutions. And of course, there are solutions to the capacity constraint challenge as well.

## ▶ Tackling the challenges of growth through a holistic approach

First of all, I want to stress the importance of taking a holistic approach. To think that there exists a "one size fits all" solution to this challenge is, in my view, utopian. We need to deploy all the appropriate tools at our disposal.

A first set of solutions lies in innovation and new technology. Through the improved standards of air traffic management (ATM) and the successful deployment of SESAR we will be able to use the airspace more efficiently. In order to tackle future challenges, we need to concern ourselves with innovative technologies and envisage the safe accommodation of these at an early stage.

In ATM, we have established a comprehensive innovation cycle through which stakeholders and European institutions work and

## Sustaining aviation growth: an EC perspective on the opportunities and challenges ahead in the aviation sector

invest together to define, develop, validate and deploy new solutions that not only aim to improve the performance of ATM but also allow us to tackle in a coherent manner the air transport challenges of the future.

Naturally, from the European Commission's perspective, we will also need to look at regulatory solutions as a possibility to unlock capacity. Several EU legislative texts include provisions affecting capacity at airports: Slots Regulation, Airport Charges Directive and traffic distribution rules in the Air Services Regulation. The Commission is currently reviewing these texts, conducting evaluations and updating studies. Major airport investment is "lumpy" and indivisible; it is also costly and this is why discussions about airport charges often put airlines and airports at odds. We need a balanced approach in this respect.

A reflection could also be made on whether there are synergies between the different texts that could lead to a better use of airport capacity.

### ► Furthering inter-modality to alleviate aviation

Although the issue at hand is the challenge of increasing capacity in aviation in a sustainable manner, I would also like to point to other modes of transport as another way to alleviate the capacity constraint in aviation.

The topic of multimodality is definitely a vital part of our basket of measures. In fact, 2018 was chosen as "the Year of Multimodality" by Commissioner Bulc. As we said in the Aviation Strategy for Europe, European airports should improve their multimodal connections,

leading to a more efficient transport network and improved passenger mobility.

We need to provide reliable, efficient, more sustainable and environmentally friendly alternatives that offer user-centric mobility solutions. That way, we take some of the pressure off the airports.

### ► Growing aviation sustainably

We need to work to deploy all these solutions simultaneously, and always take the negative externalities of aviation – such as the environmental impact – into consideration. After all, we are working for the citizens of the EU. And in our quest for more capacity, we need to strike a balance with the three big "S"s of aviation: Safety, Security and Sustainability, including their climate and environmental impact at large and on the local community living in the proximity of the airports.

The number of major EU airports that handle more than 50 000 annual aircraft movements is expected to increase from 82 in 2017 to 110 in 2040, and therefore aviation noise, as well as the impact on local air quality, may well affect existing or even new populations. By 2040, CO<sub>2</sub> and NO<sub>x</sub> emissions are predicted to increase by at least 21% and 16% respectively.

The European Commission is closely monitoring the evolution of externalities linked to aviation. In January, the second edition of the European Aviation Environmental Report was released. Its conclusions are clear: while important progress has been achieved, it has not allowed to fully balance the growing externalities due to the overall increasing traffic.

We are strong supporters of the first ever global Carbon Offsetting and Reduction Scheme in International Aviation (CORSIA). We believe that if we set the right Emissions Units Criteria and the right criteria for sustainable fuels we will have a good and ambitious global system within ICAO to reduce CO<sub>2</sub> emissions.

In the European Union, our policies often go beyond what is agreed at ICAO in terms of environmental standards. Our belief is that sustainability of aviation in the future must be achieved through innovation and modernisation. The proof of our commitment to transform aviation in that sense is the substantial financing streams via notably Horizon 2020 for SESAR and CleanSky, and our support to other ECAC and ICAO States on capacity building.

### ► Conclusion

Let me finish by stressing our commitment to develop sustainable aviation with a balanced approach, to ensure that all our objectives can be progressed in a fair and effective way. The development of the air transport sector and its environmental sustainability go hand-in-hand. We are fully aware of the need to minimise the harmful effects on the ecosystem and on citizens while keeping the healthy growth of the aviation sector.

My view is that we can have both: increasing capacity and investing in growth as well as driving up environmental performance and addressing the concerns of the local community. For the sake of this goal, we will keep working through 2019, looking ahead to the ICAO Assembly in autumn and to completion of the CORSIA package, among many other goals! ■

**Flor Diaz Pulido** joined the European Commission in 1995 in the legal affairs department of DG Fisheries. She later moved on to energy matters (1999, DG ENER: inter-institutional matters, internal market and legal affairs) and transport (2002, DG MOVE, aviation and maritime transports: internal market, consumer affairs related to transport, passenger rights), where she was appointed head of sector and later deputy head of unit from 2009.

In 2013, she joined DG GROW as deputy head of Unit C2 Resource Efficiency and Raw Materials. In 2017, she joined the Galileo department as deputy head of unit to the Galileo deployment and strategy unit.

In June 2018, Ms Pulido returned to aviation matters as head of unit in the Aviation Policy Unit at DG MOVE.





## MEMBER STATES' PERSPECTIVES

- › A regulator's perspective – safety in Portugal
- › Solidarity Airport: the future of transport in the Central and Eastern Europe region
- › Managing security in a complex and fast-moving aviation industry



## A regulator's perspective – safety in Portugal

**Luis Ribeiro**  
Chairman of ANAC, Portugal

In 2017, the global economic activity consolidated the recovery of the previous year. At domestic level, and according to the projections prepared by the Bank of Portugal, the economic recovery process was consolidated in 2017, with the GDP (gross domestic product) growing 2.6%, after an increase of 1.5% in 2016.

Regarding the aviation sector, demand in 2017 was strongly boosted by the improved global economic conditions recorded throughout the year, which, according to ICAO, will lead to a new record of 4.1 billion passengers transported on scheduled routes, representing an increase of 7.1% compared to 2016.

### ► Regulatory framework

The Secretary General of ICAO stated that *“air traffic growth is an important contribution to achieving the United Nations’ Sustainable Development Goals for 2030, providing the opportunity to free an entire generation from poverty, not merely symbolically, but literally. As an agency of the United Nations, ICAO is deeply committed to ensuring that all countries have the opportunity to benefit from the doubling in the number of flights and passenger volume expected for the next 15 years.”*

Due to its strategic geographical position, Portugal has an important role in the provision of facilities to international civil air navigation, covering its territory as well as an important portion of the North Atlantic area, delegated by ICAO, corresponding overall to an area of 5 800 000 km<sup>2</sup> (five million eight hundred thousand square kilometres).

The Portuguese Civil Aviation Authority, ANAC, has jurisdiction over the civil aviation system related to the national territory, including airspace subject to the jurisdiction of the Portuguese State, and is competent to articulate the action of all the entities and means of the civil aviation system, taking into account the evolution of the sector, and ensuring the integration and coordination of actions in the civil aviation areas of safety, security and regulation.

Its mission is to regulate and oversee the civil aviation sector, as well as to supervise and regulate the activities carried out in this sector in accordance with international technical standards and regulations in force, except in relation to military aviation.

The accelerated growth <sup>(1)</sup> in traffic presents several challenges for all stakeholders in the national civil aviation system, namely the renewal of the main national air carriers’ fleet, requiring ANAC’s special attention to assure the mainte-

nance of the highest standards of safety.

ANAC’s efforts to improve the effective implementation of applicable ICAO SARPs earned Portugal the ICAO Council President Certificate in 2018 in recognition of the State’s progress in resolving its safety oversight deficiencies in 2017.

The pressure of traffic demand has an impact on the various operators within the civil aviation system, air navigation service providers, airport operators, air operators, maintenance organisations, as well as on technical staff, pilots, air traffic controllers, maintenance technicians and others.

The constraints on airports’ infrastructures and the increasingly tight schedules lead to a high risk in operations, imposing the need for all service providers to establish and maintain a Safety Management System (SMS).

The need to provide services, infrastructures, equipment and information to airspace users in

(1) The impact of air traffic growth in Portugal was significant in the two flight information regions (FIR), 772 474 movements were controlled in 2017, a 9% increase vis-à-vis 2016. For 2018, the annual growth in the Lisbon FIR reached 3.5% and in the Santa Maria FIR + 2.6%. The number of passengers processed at national airports in 2017 exceeded the historic mark of 50 million, reflecting a growth of 7 million passengers in relation to 2016. However, the traffic growth trend, despite slowing down in 2018, allowed for total traffic to exceed 52 million passengers.



© Monnet - AdobeStock

## State Safety Programme

order to ensure the safety, regularity and efficiency of international air navigation imposes on the ANSP the establishment and maintenance of a Safety Management System that systematically addresses the activities that lead to safety management in order to achieve higher standards of safety and quality.

In order to respond to the traffic demand, the air operators have to reinforce their fleets and maintenance organisations have to adapt to new equipment and new technologies. The challenges these service providers are facing imposes the need to implement a Safety Management System, meaning a systematic approach to managing safety, including the necessary organisational structures, accountabilities, policies and procedures.

The oversight and inspection, including audits of the stakeholders, is an important area in ANAC's activity to regulate the sector, and contributes to the identification, analysis and verification of the actions to mitigate the risks.

In order to manage organisational structures, accountabilities, policies and procedures and to comply with Annex 19, the implementation of the State Safety Programme (SSP), in Portugal is in line with the size and complexity of the Portuguese civil aviation system, and it requires coordination among a group of five different authorities responsible for the State's aviation functions.

An SSP, being a management system for the regulation and administration of safety by the State, recognises that States as well as service providers have safety responsibilities, and it provides a framework within which service providers are required to establish a Safety Management System (SMS).

ANAC is the Placeholder Organisation of the national SSP and has its executive coordination. The other four entities are:

- **The National Aeronautical Authority (AAN)** – responsible for the regulation of the National Aeronautical Search and Rescue Service.
- **The National Authority for Communications (ANACOM)** – assigned as the national regulatory authority for communications.

- **The Maritime Accident Investigation and Aeronautical Meteorology Authority Office (GAMA)** – to ensure compliance with the obligations arising from the international treaties in the field of aeronautical meteorology.
- **The Air and Rail Accident Investigation Authority (GPIAAF)** conducts safety investigations and determination of the probable cause(s) of an accident or incident.

In addition to ICAO safety requirements, the New Basic Regulation establishes that *“Each Member State shall, in consultation with relevant stakeholders, establish and maintain a State safety programme for the management of civil aviation safety in relation to the aviation activities under its responsibility”*, and that the SSP shall include or be accompanied by a State Plan for Aviation Safety.

Based on the assessment of relevant safety information, each Member State, in consultation with relevant stakeholders, shall identify in the State Plan for Aviation Safety the main safety risks affecting its national civil aviation safety system and shall set out the necessary actions to mitigate those risks.

## A regulator's perspective – safety in Portugal



© AZP/Worldwide - AdobeStock

Some trends may indicate problems in an organisation, namely significant personnel turnover, reduction in safety standards, decreasing training standards, inadequate aircraft maintenance.

The civil aviation system should promote a 'safety culture' facilitating the spontaneous reporting of occurrences and thereby advancing the principle of a 'just culture'. Just culture is an essential element of a broader safety culture, which forms the basis of a robust safety management system.

The National Mandatory Occurrence System established in 1999 intends to contribute to air safety improvement by ensuring that relevant information on safety is reported, collected, stored, protected and disseminated. The sole objective of occurrence reporting is the prevention of accidents and incidents and not to attribute blame or liability.

Safety performance and monitoring information comes from a variety of sources, including formal

auditing and evaluation, investigation of safety-related events, continuous monitoring of day-to-day activities related to the delivery of services, and input from employees through hazard reporting systems.

Along with the Mandatory Occurrence Reporting System, persons working in the various areas of activity of the aviation sector are encouraged to report, on a voluntary basis, any occurrence as established by Regulation (EU) 376/2014.

To ensure the capture and storage of data on hazards and safety risks at an individual and aggregate State level, ANAC has established mechanisms to develop information from the stored data and to exchange safety information with service providers and/or other States as appropriate, adopting the ECCAIRS as the national database.

This database allows ANAC to identify systemic and cross-cutting hazards that might not otherwise be identified by the safety data analysis processes of individual service providers, and also to de-

velop a risk management system for aviation occurrences in order to determine the SPLs (safety performance indicators) for Portuguese civil aviation.

The definition of safety indicators for civil aviation is a central issue at the national, as well as the European and international, level. In accordance with its report on civil aviation policy, Portugal's goal is to achieve a high safety standard in a European comparison, which can be depicted through acceptable levels of safety performance (ALoSP).

The definition of ALoSP for Portugal is based on that contained in ICAO Doc. 9859.

The easiest and most-used way to set ALoSP is by the statement: "We are safe now, we shall be safe in the future", which means taking the actual figures, adding some safety buffers and defining this as "new" State safety targets.

## ► Organisational challenges

The safety performance improvement within a State is highly dependent on its safety culture. The communication of its safety policies, safety plans, as well as other important SSP documentation can also improve awareness and collaboration among staff, so that safety management processes put in place by States remain effective.

In this regard, ANAC organises training programmes and workshops on SSP and SMS and other specific events on a regular basis to ensure effective communication and dissemination of safety information within the CAA and to the relevant service providers.

One of the eight critical elements included in the national SSP is the qualified technical personnel.

The knowledge and experience requirements for the technical staff performing safety oversight functions, and the provision of appropriate training to maintain and enhance their competence at the desired level, is part of the ANAC Recruitment and Training Manual.

In 2017, ANAC implemented a new recruitment policy, which includes new careers, better terms of employment and an increase in salaries in order to attract and retain high-qualified professionals from the civil aviation sector and to compete with the service providers in the sector.

ANAC is responsible for the ongoing review of the effectiveness of the State Safety Programme and for ensuring its continuous improvement in order to meet the State's safety objectives.

## ► Portuguese State Safety Plan

The acceptable level of safety performance serves as a link and guideline in developing national aviation safety work as well as a tool for service providers in developing safety management systems. International requirements (such as those of ICAO, the European Union and EASA) shall be taken into account in defining the level of safety.

The development of Portuguese safety performance indicators (SPIs) follows EU standards and principles, and efforts have been made to develop indicators that are as comprehensive as possible and take into account the national circumstances specific to Portugal.

The Portuguese State Safety Plan (SSp) lists the Portuguese safety performance indicators for the various sectors, which will be used to monitor how the targets are achieved, and it describes the principles for defining safety levels (tiers).

Having in mind the implementation of safety promotion, ANAC also has a dedicated area on the internet to disseminate information on SSP and related safety issues.

The SSp 2018 was implemented along the year 2018 and monitored by the SSP Implementation Team, which includes members of the five entities in charge of the national SSP. An annual report will be published at the end of the first quarter of 2019.

The vision of the ICAO Global Aviation Safety Plan (GASP) is to achieve and maintain the goal of zero fatalities in commercial operations by 2030 and beyond.

To mitigate the risk of fatalities, the high risk categories of occurrences need to be addressed.

Those identified for the 2020-2022 edition of the GASP:

- a) controlled flight into terrain (CFIT);
- b) loss of control in-flight (LOC-I);
- c) mid-air collision (MAC);
- d) runway excursion (RE); and
- e) runway incursion (RI)

are part of the National SSp 2019-2021.

The aim of the Portuguese SSp 2019-2021 is to reduce the number of incidents and accidents in line with the GASP's vision, and also in line with European Plan for Aviation Safety (EPAS) 2019-2023. The SSp for the 2019-2021 triennium was adopted in December 2018 by the Board of ANAC and by the SSP Coordinating Committee. ■

**Luis Miguel Ribeiro** has been chairman of the Portuguese Civil Aviation Authority, the regulator for the Portuguese civil aviation sector, since July 2015. He has a degree in economics from Lisbon University (1994) and began his career in 1995 in the Ministry of Finance as a senior adviser. From 2005 to 2008 he was deputy to the Secretary of State for Treasury and Finance. In 2008, he became deputy director of the General Directorate of the Treasury until 2010, where he was responsible for monitoring and oversight of the corporate sector owned by the State.

In 2010, he was appointed member of the Board of Metropolitan of Lisboa. He ceased functions in August 2012 to assume the position of member of the board of ANA – Airports of Portugal, SA. Within the ANA Group – Airports of Portugal, SA, he held the positions of chief financial officer of the group, member of the Board of ANAM – Airports and Air Navigation Madeira SA, and managing director of Portway – Handling de Portugal, SA, until July 2015.



## Solidarity Airport: the future of transport in the Central and Eastern Europe region

**Michal Witkowski**  
*Vice-President Aviation Standards,  
 Civil Aviation Authority, Poland*

In the period from 2003 to 2017, the number of passengers transported by air carriers in Poland increased by over six. During the same period, instrumental flight rules traffic movements in the Polish airspace increased by almost three. All the available forecasts indicate further dynamic development of the aviation market in Poland. The growing demand for air transport will bring a significant challenge for airspace management. In this context, Poland, as an EU border State, plays a key role in the performance of the wider European airspace network.

Aviation is a key part of Poland's transport infrastructure and the sector relies greatly on the performance of the airspace to operate efficiently and continue to grow. The Polish aviation market is now growing above the average in the EU. The demand forecasts predict that traffic levels in Polish airspace will continue to rise, driven in part by the development of the new Solidarity Airport – a main feature of the **Central Transport Hub (CTH) project**. Irrespective of the CTH project, airspace modernisation is needed in Poland

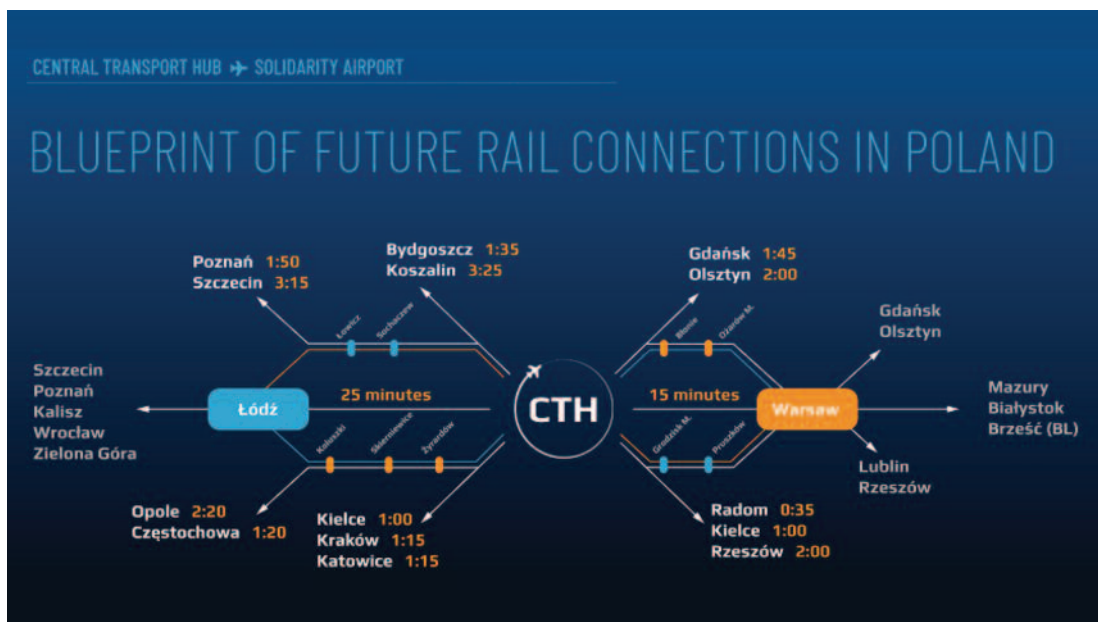
to accommodate the growth in demand at the existing airports, while enhancing safety, operational resilience, environmental performance and market competitiveness.

The development of the new Solidarity Airport as a part of the CTH project presents the opportunity to fundamentally redesign and modernise not only the airspace and airport infrastructure but also the railway network in Poland.

It is envisaged that the Solidarity Airport will be located between Łódź and Warsaw, initially with two

parallel runways on the east to west line. The absence of major obstacles and environmentally sensitive areas close to the airport is expected to enable a 24/7 operation that will serve c. 45 million passengers per year (with the perspective to rise to 100 million with further development).

CTH is to be a growth catalyst that will enhance connectivity and hub connectivity. It will serve to develop long-haul connections and intercontinental traffic. The accompanying investments in rail infrastructure aim to reduce travel times





from Poland's largest cities to CTH to 2-2.5 hours, and 15-20 minutes to central Warsaw. Planned road investments would involve up to 248 km of new or expanded roadways. The project will cover 3000 hectares (30 sq km). Further, the new city would support up to 100 000 employees working at CTH and, ultimately, create a global metropolis from the agglomeration of Warsaw, Łódź and the new CTH city. The total estimated cost (till 2027) is PLN 30.9-34.9 billion (€ 7.43-8.39 billion).

#### THE CENTRAL TRANSPORT HUB (CTH) PROJECT

The Central Transport Hub (CTH) project is a response to a high demand of air travel growth in the Central and Eastern Europe (CEE) region.

Major points to be highlighted:

- 1) Construction of a new hub airport 40 km from Warsaw is one of the main conditions for further development of LOT Polish Airlines.

- 2) Reconfiguration, modernisation and extension of Poland's rail network with CTH as its hub.
- 3) Extension of the nearby A2 motorway along with numerous ring roads.
- 4) Closure of Warsaw's existing Chopin Airport and transfer of its airport functions to CTH.
- 5) Development of a first Smart City in the CEE.





New city. Integration of Warsaw and Łódź

A new city will be created between Warsaw and Łódź, as always happens around airports. The concept provides for creation of legal and infrastructural conditions to locate a new city around the Solidarity Airport, which could comprise business parks, a world-scale fair, an exhibition and congress centre for Central Europe, conference centres, office and administration buildings or a campus co-created by the federation of Polish higher education institutions.

The concept also provides for implementation of development programmes related to important national heritage sites in the vicinity or revitalisation projects for nearby urban areas (e.g. in Łódź). The investments will lead to an actual merger of the Warsaw and Łódź agglomerations. ■



**Michał Witkowski** has been Vice President for Aviation Standards at the Polish Civil Aviation Authority since 2017. He has over 20 years' experience in aviation. Previously, he worked for the "Polish Airports" State Enterprise and LOT Ground Services, where he held managerial positions.

Mr Witkowski graduated from the College of Safety and Security in Warsaw. He has a major in EU Transport Policy from the Pułtusk Academy of Humanities and he completed postgraduate studies on Safety Management in Aviation (SMS) at the Łazarski University. Mr Witkowski has participated in numerous training for auditors and inspectors, *inter alia* at the Singapore Aviation Academy. He is an alternate member of the EASA Management Board.



## Managing security in a complex and fast-moving aviation industry

**Guðjón Atlason**

*Director, Infrastructure and Navigation  
Icelandic Transport Authority Aviation Security*



**Security is certainly one of the aviation domains, a core process. Standards and Recommended Practices (SARPs) for implementation by ICAO Member States are published in Annex 17 to the Chicago Convention. In spite of strong connection to other sectors, which demands coordination and interfacing of processes, such as with the police, it is important for stakeholders that aviation security remains precisely that: an aviation domain.**

**Any security incident is one too many. The present and future challenges are many in order to keep the incident rate low. Amongst other things, this is related to the evolution of and changes in the aviation transport system and the aviation security environment, including expectations, demands, techniques and threats.**

### ► Security in a fast-growing industry and complex environment

One of the major challenges in aviation security for the last few years has been the enormous growth in air travel. The aviation industry is growing at an ever-faster rate while at the same time the security environment is becoming more complex bringing new threats and emerging issues and putting a strain on conventional methods, personnel management and financial and technical resources. This enormous growth in air travel causes increasing concern for effective security management in air transport and the growth is forecast to continue at a high rate in the decades to come (IATA, 2016).

The complex environment consists of infrastructure, equipment and operation, where security measures have to be applied. There is increasing concern over the insider threat bringing more constraints for new hires, as high numbers of personnel have to be managed for security-related issues. Aerodromes are a mosaic of different entities and agencies operating on the aerodrome or requiring regular or ad hoc access.

As air travel continues to grow, conventional reactive methods, responding mostly to occurrences with ever-more complicated and prescriptive regulations that are amended each time an incident occurs in order to prevent re-occurrence, have become less effective. Such traditional methods for reducing security risks to an acceptable level may not be sufficient, and new methods for managing security are desirable. It is time the security domain emphasised the importance of researching the use of other methods in addition to what it presently has. Other aviation domains have been implementing methods designed with strategies that are highly proactive in the search for solutions to risks and problems in the operational field and that provide better assurance for continuous improvement. The methods belong to what is called the modern perspective in safety management, which includes risk and occurrence management. It focuses on the assumption that no single element can meet the expectations for risk management; other factors should be considered

in addition to the regulatory requirements, and the active search for potential threats, hazards and trends is considered important to define best practices while ensuring that the required standards are always met (ICAO Doc. 9859, Second Edition, 2009).

Regulation development changes somewhat with this approach as regulations and requirements become more objective-based and the regulatory oversight becomes more performance-based, sometimes called risk-based. This means that while all requirements are overseen, the authorities identify – by means of statistics and oversight –, where there may be vulnerabilities in a given operation, and concentrate more oversight activities on those processes.

## ► Processes and systems

The modern perspective is based on process approach and systems.

A process has been defined as a collection of activities that converts inputs into outputs (see Figure 1). Inputs to a process may typically be equipment, people, material, policies and environment. A process contains one or more procedures detailing the step-by-step “flowing” method, which can be drawn into a flow chart. To simplify, a process can be considered *what* is to be done, and the procedure *how* it is done. The International Organization for Standardization (ISO) promotes the adoption of a process approach when developing, implementing and improving the effectiveness of a management system (ISO 9001:2015).

When the process approach is applied, processes are documented and implemented into the organisation management and the operation. One of the main things to be considered when using a process approach to management is the interfacing of processes. Sometimes gaps or grey areas may form where one process meets another with increased vulnerability for threats and occurrences. It is easier to identify and manage such interfacing gaps when the processes are considered a part of a system. A system can be considered to contain people, equipment, procedures, environment and management. ISO simply defines a system as a set of interrelated or interacting elements (ISO 9000:2015). In the case of aviation security, these elements can be considered to be the security processes related to the organisation and the operation.

## QUALITY MANAGEMENT

To begin with, I would like to mention two common statements one hears thrown around from time to time. The first is that a safety management system (SMS) (or a security management system – SeMS) is not quality management or quality assurance. The second is that security is not the same as safety. Both hold some truth but mostly they are a testimony that more explanation needs to be provided to facilitate the understanding of management systems.

Management systems, such as the quality management system (QMS) and the safety management system are developed from quality assurance theories and principles. In fact, the systems are simply a tool. Therefore, while it is true that safety is not the same as security, this does not preclude that the same tool, the management system, can be applied to both fields. In the case of the SMS, for example, the principles are applied to the management of safety, and in the same way – with slight amendments – they can be applied to the management of security. Furthermore, all such management systems, in addition to domain-specific processes, have several processes in common allowing for the integration of management systems, and more economic use of resources (see Figure 2).



Figure 1. A process (ISO 9000:2015)

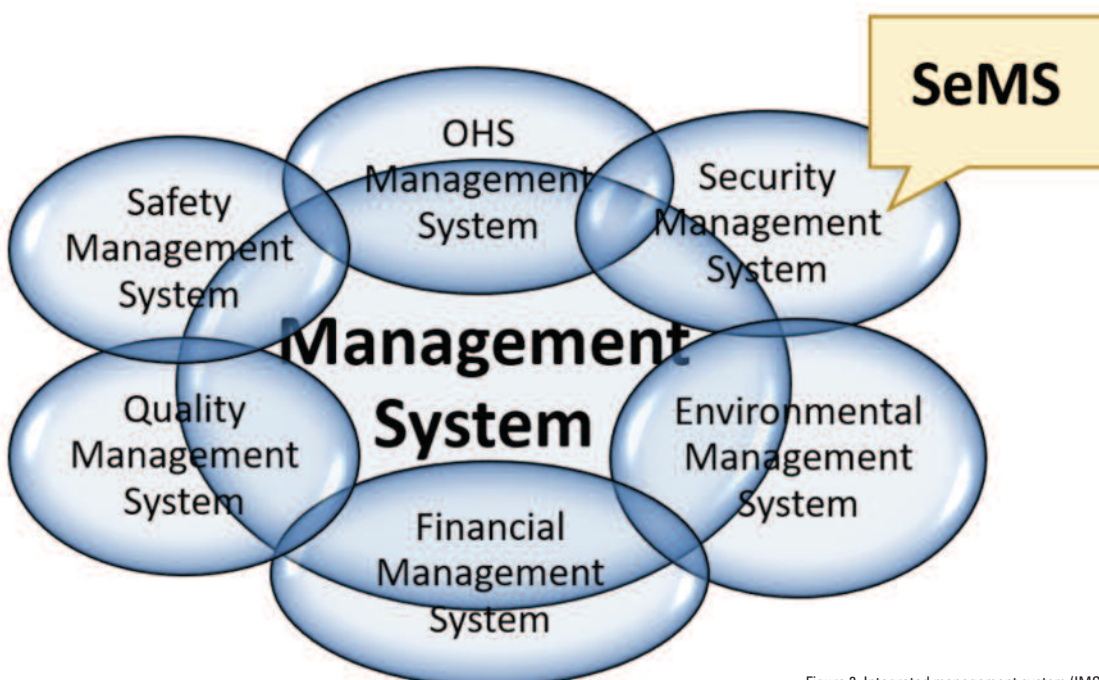


Figure 2. Integrated management system (IMS)

The concept of quality control and quality control programmes has been commonly used in the security domain. This is fine and in many instances quality control methods can be used to test end products. Sometimes, the two terms quality control (QC) and quality assurance (QA) are used synonymously to refer to the same concept. This is in fact not entirely precise. In order to better understand quality management systems and processes, QC may be considered fundamentally *reactive*, while QA may be considered *proactive*:

- a QC is a failure **detection** system that uses a testing technique to identify errors or flaws in products and tests the end products at specified intervals, while
- a QA is a failure **prevention** system that predicts which product or services (security), quality standards and legal aspects could possibly go wrong and then takes steps to manage the deficiencies, take timely corrective actions or prevent the use of flawed products or services.

**SECURITY MANAGEMENT SYSTEMS (SeMS)**

As illustrated in Figure 2, a SeMS is a management system, nothing more, nothing less. In line with the ICAO definition of an SMS, a SeMS can be defined as: *A systematic approach to managing security, in-*



© Peter Atkins - AdobeStock

cluding the necessary organisational structures, accountability, responsibilities, policies and procedures. Some suggestions for aviation SeMS have recently been developed, such as the United Kingdom Civil Aviation Authority's Civil Aviation Publications (CAPs) on the subject (UK CAA, 2014 and 2018). These suggestions are in line with the safety management systems work from ICAO. This article supports these approaches and emphasises that all the fundamental processes of an ICAO SMS can be applied to a functioning SeMS and suggests that the framework for SeMS will be fully aligned to the

ICAO SMS framework as it appears in Annex 19. There is no need to reinvent the wheel. The management principles are the same and can be applied to both subjects. Figure 3 shows the processes of a SeMS framework fully based on the ICAO framework for SMS. The SeMS consists of four pillars and 13 elements. In addition, several sub-elements are shown in the picture, mostly derived from ICAO Doc 9859.

All processes of a SeMS are important for the system to function. However, the main emphasis is on the central role of the system to manage security risks and the con-

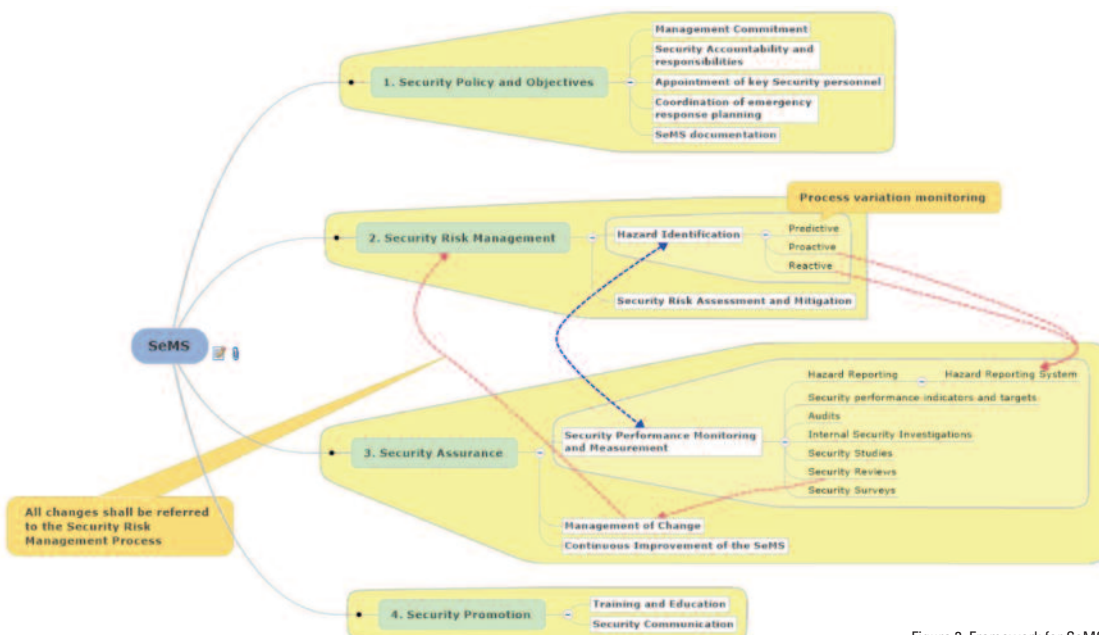


Figure 3. Framework for SeMS

## Managing security in a complex and fast-moving aviation industry

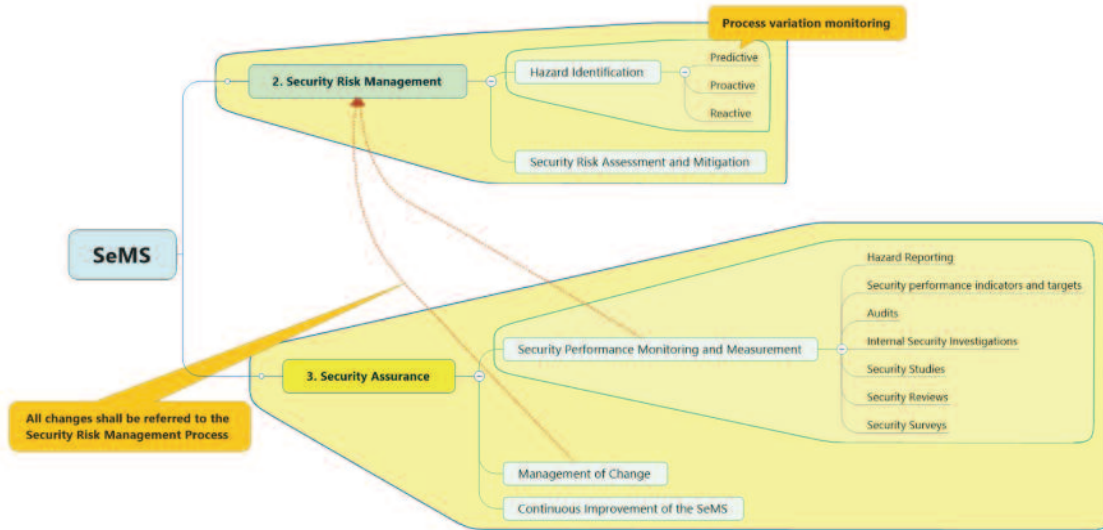


Figure 4. The security risk management and the security assurance processes

tinuous improvement of processes. By looking closer at pillars 2 and 3 of the SeMS, these central roles can be studied further. Figure 4 highlights the processes of these pillars.

There are various interconnections between the elements in the system and some relationships are shown in Figure 4. The security risk management process (SRM) is a central process consisting of three basic elements: hazard identification, security risk assessment and mitigation measures. The SRM process is sometimes called security assessment in daily language for simplification. Please note that a

risk assessment is only one of three elements in the SRM process and is not sufficient on its own to manage security risks. The relationships shown by the red lines emphasise the importance of the SRM process and show the main material which is processed through the SRM. The main "food" for the SRM process comes from changes, occurrences or as a result of the security performance monitoring and measurement processes. There is a slight difference between how changes are security risk assessed on one hand, and, occurrences on the other hand. Figure 5 shows how a change can be processed through

the SRM process, and Figure 6 shows the same for an occurrence. The difference is mainly that root cause analysis is added to the hazard identification process. Such root cause analysis may, for example, consist of a Cause and Effect Diagram or the "5 Whys" method. In any case, it is essential that the root cause analysis is properly performed and documented when occurrences or deficiencies are security assessed. All elements of the concerned process or system always have to be examined when attempting to identify root causes for occurrences.

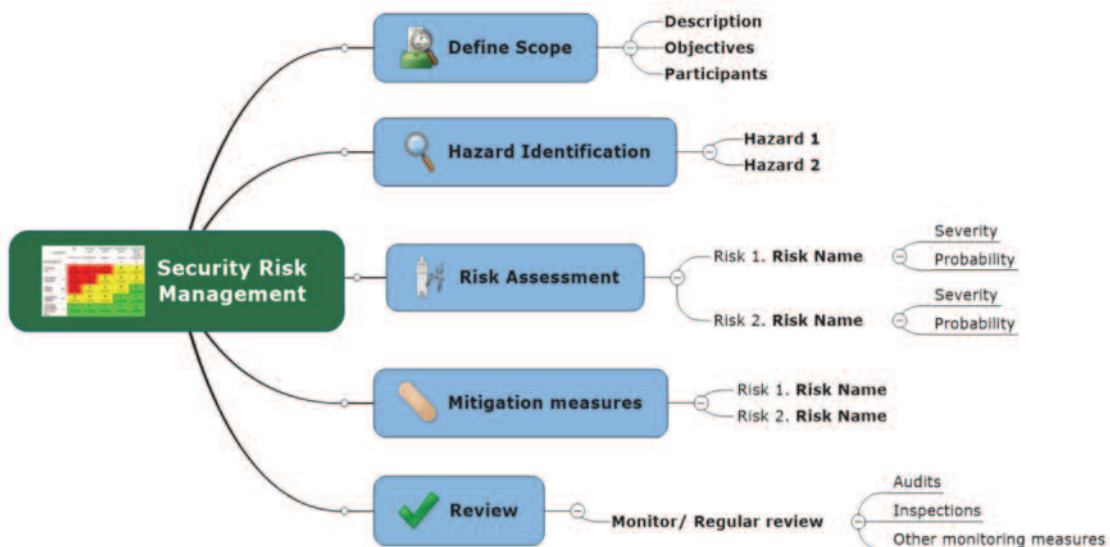


Figure 5. An example of an SRM process applied to changes

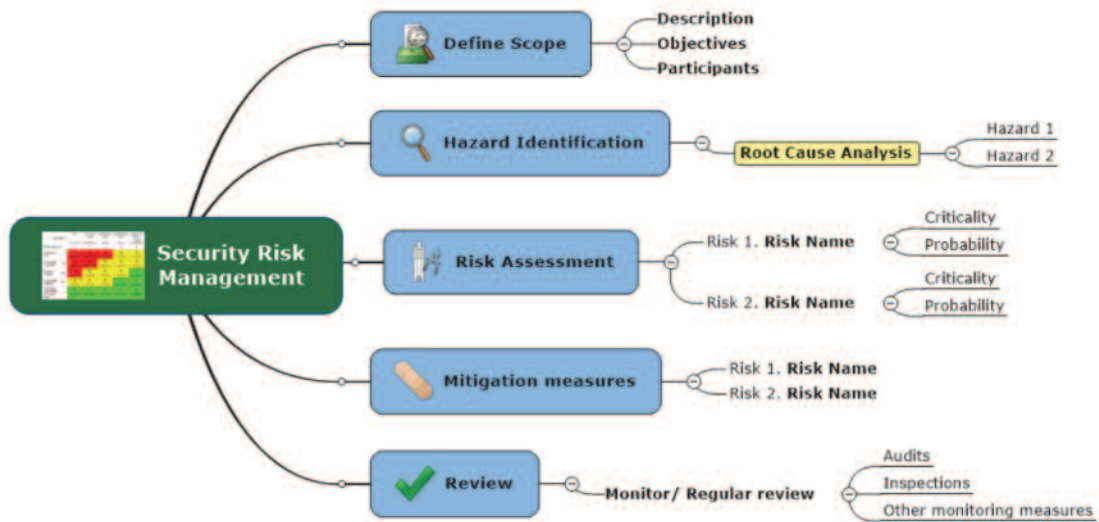


Figure 6. An example of an SRM process applied to occurrences or deficiencies

## ► Changes

There are all kinds of changes in today's environment, all with challenges but of a varying kind. Changes relating to infrastructure, equipment, procedures or organisation have different implications for the people affected by the change, but all such changes need to be managed to increase the chance of becoming successful. Organisational changes are very challenging with a high failure rate (Kotter 1995). The implementation of a management system can be considered a major change for any organisation. Unfortunately, ICAO may not have realised how much

effort is needed to implement changes of this magnitude. It may be assumed that the implementation of the SMS has taken a good deal longer than it would have, had the change management process been properly prepared and guided during the process of developing and issuing the SARPs for SMS as requirements for a whole industry (Atlason 2018). The implementation time for SMS has been long, but SMS has now become the norm for the entities required to have a functioning SMS. The security domain could, however, learn from this and make efforts to be better prepared for the changes that need to be implemented for improved security management.

Besides the efforts needed for the organisational changes, it is important that the security domain carefully studies the cultural aspects with the aim of improving the security culture. Security culture needs to adapt to enable the desired functioning of SeMS. For example, the security reporting culture has to be developed further, supported by management commitment and just culture principles.

All the items briefly mentioned in this article are material for further studies and research. It is important to put more effort into this material so that improvements can be developed and active SeMS can be implemented.



## ► Opportunities

This article has briefly touched on some of the challenges presently facing security management in aviation. There are many more, and more space is needed for detailed analysis. All these constraints and challenges, however, do provide good opportunities for improvement. The opportunities identified include the benefits that might be possible by re-evaluating methods and comparing the conventional versus the modern management methods of security management. It is important to learn from other aviation domains and sectors that have developed and implemented management systems, and to use the available literature and research that provides guidance for successful organisational changes.

In order to meet the increasingly demanding needs for effective security measures, this article emphasises the need for further research on security management methods and points out the possibilities of adapting the models from other management systems, in particular from the ICAO aviation safety management methods. ■

## Main takeaways

- › Align the aviation security domain with other aviation domains.
- › Move from failure *detection* methods to failure *prevention*.
- › Adapt the process and systems approaches.
- › Use the more modern model for proactive approach.
- › Develop more objective-based requirements and performance-based oversight.
- › Develop and implement SeMS based on the ICAO framework for SMS.
- › Implement just culture principles.
- › Take notice of the importance of culture in changes.
- › Amend Annex 17 to include SeMS requirements for operators.
- › Add details for the SeMS framework into Annex 19 to the Chicago Convention.

## REFERENCES

- Atlason, G. (2018). *Implementation of Safety Management Systems in the Aviation Industry. From the viewpoint of the Management of Change*. Reykjavik. Háskólaprent. Retrieved 14.01.2019 from: <https://skemman.is/handle/1946/29331>
- International Air Transport Association (IATA) (2016). IATA Forecasts Passenger Demand to Double Over 20 Years. Webpage. Retrieved 14.01.2019 from: <http://www.iata.org/pressroom/pr/Pages/2016-10-18-02.aspx>
- International Civil Aviation Organization (ICAO) (2009). *Safety Management Manual (SMM) Document 9859* (2<sup>nd</sup> Edition). Montreal: ICAO.
- International Civil Aviation Organization (ICAO) (2013). *Annex 19 to the Convention of International Civil Aviation. Safety Management* (1<sup>st</sup> Edition). Montreal: ICAO
- International Civil Aviation Organization (ICAO) (2013). *Safety Management Manual (SMM) Document 9859* (3<sup>rd</sup> Edition). Montreal: ICAO.
- International Civil Aviation Organization (ICAO) (2017). *Annex 17 to the Convention of International Civil Aviation. Security. Safeguarding International Civil Aviation Against Acts of Unlawful Interference* (10<sup>th</sup> Edition). Montreal: ICAO
- International Organization for Standardization (ISO) (2015). DS/EN ISO 9001:2015 *Kvalitetssledelsessystemer – Krav* (5. Udgave). *Quality Management Systems – Requirements* (Fifth Edition). Copenhagen: Dansk Standard.
- International Organization for Standardization (ISO) (2015). ISO 9000:2015 (EN). *Quality management systems – Fundamentals and vocabulary*. Online Browsing Platform (OBP). Retrieved 14.01.2019 from: <https://www.iso.org/obp/ui/#iso:std:iso:9000:ed-4:v1:en>
- Kotter, J. P. (1995). Leading Change: Why Transformation Efforts Fail. *Harvard Business Review*, 73 (2), 69-77
- UK CAA, Department for Transport (2014). CAP 1223. *Framework for an Aviation Security Management System (SeMS)*. Retrieved 21.01.2019 from: [https://publicapps.caa.co.uk/docs/33/CAP%201223%20SeMS%20Framework\\_Feb18\\_corrections.pdf](https://publicapps.caa.co.uk/docs/33/CAP%201223%20SeMS%20Framework_Feb18_corrections.pdf)
- UK CAA, Department for Transport (2018). CAP 1273. *Implementing a Security Management System: An Outline*. Retrieved 21.01.2019 from: <https://publicapps.caa.co.uk/docs/33/CAP%201273%20Implementing%20a%20Security%20Management%20An%20Outline%20v3.1%20Feb%202018.pdf>

**Guðjón Atlason** has a Master of Science in Strategic Management from the University of Iceland and 35 years' experience within the aviation industry and public sector, including with an international organisation, industry association, in aerodrome operations, flight operations and aviation quality, security and safety management. He was an inspector with the Icelandic civil aviation authority for many years. Internationally, he has worked with ACI World as manager for safety and operations and with EASA as a rulemaking officer and standardisation team leader. Mr Atlason participated in inspections as a national aviation security inspector for the European Commission from 2007 to 2009. He has studied change management in relation to the implementation of safety management systems in aviation. His main areas of speciality are: aerodrome certification and safety management, aviation security, flight operations, strategic management, change management, aviation and educational studies. He has provided aviation management courses including on safety management systems, and has participated in committees and working groups internationally. Mr Atlason was a member of the Group of Aerodrome Safety Regulators (GASR) from 2003 to 2009. While working with ACI (2013-2014) he was a member of working groups of the ICAO Safety Management Panel and the ACI World Safety and Technical Standing Committee.



**INDUSTRY**

**PERSPECTIVES**

- › Managing passenger growth:  
a Turkish perspective on security
- › Sustaining aviation benefits  
beyond borders



## Managing passenger growth: a Turkish perspective on security

**Mansur Günes**

*Deputy General Manager  
TAV Private Security Services Inc*

**TAV Security started out in 1997 as a 450-people company, and today it provides security services for five major airports in Turkey, with 5 000 employees. Ataturk International Airport, with the largest passenger flow locally and as the 15<sup>th</sup> busiest airport in the world, has naturally seen some changes in economic focus and passenger behaviour and received its share of impact from regional shifting trends.**

Multiple studies (EUROCONTROL, 2018; Aksoy & Dursun, 2018) suggest that Turkey, as one of the four leading countries in civil aviation, will continue to grow. Studies also say that within the last five years, flights have re-routed to Turkey, around 50 percent, with Bulgaria and Romania to some extent. In the future, as airspace congestion is also an issue, Turkey will be receiving 2.5 times more flights per day. Istanbul doubles its total passenger numbers almost every five years. Although in general the year 2016 was tough on the industry, the collaborative efforts of all parties and compensating policy changes for investment and growth did a good job in keeping the graph steady.

Istanbul Atatürk International Airport has geopolitical prominence as the first Build-Operate-Transfer (BOT) model in Turkey. TAV Airports has been laying the foundation for its growth with many BOT model projects, and Turkish Airlines, the Turkish flag carrier, has been working very successfully to expand over this foundation. During the last five years, Turkish Airlines' destinations increased by 75%. Turkish Airlines, still a State-managed company, has grown aggressively. In 2006, Turkish Airlines had 110 aircraft, last year: 329. Turkish Airlines announced Istanbul as its global hub and became a significant transfer point for the north, south, east and west, competing with

other European airports like Frankfurt, Amsterdam, Paris and London etc. (<http://investor.turkishairlines.com/en/>).

All changes regarding passenger increase, along with rising sensitivity in the facilitation and security balance, operator and stakeholder demands and a few devastating events that had industrial and regional impacts, are shaping our understanding and operations rapidly.

From budget planning to local regulations, each airport's solution may require a different approach. Ataturk Airport is located in the city centre and has a 13 km perimeter. Annual passenger numbers in 2017 were 63.7 million and this year are expected to be about 70 million. There are around 48 000 ID holders and 119 security checkpoints, covering cargo, supplies, catering and other facilities. A wide range of security scanners such as explosive trace detection systems, explosive detection dogs, liquid explosive detection systems, computed tomography technology and explosive detection systems for cabin baggage are also in use. Seven thousand five hundred security workers are employed (police, gendarmerie, private security, etc.) and 2200 security officers just for 119 checkpoints. However, since there is a terminal entrance security layer as well, numbers are doubled from a security operations perspective.

There are 14 checkpoints operating at a centralised location and around 2500 passengers pass through every hour. That makes an average of 178 passengers per hour, per checkpoint. With all 119 checkpoints operating at the same time, around 600 security staff per shift are required. Transfer passengers reach their flights in one hour (rarely half an hour) after going through the entire process.

Physically speaking, although Istanbul has a relatively small footprint for the volumes mentioned here, there is in fact enough room to manage operations – air traffic, taxiways, runways, parking areas so on and so forth – and the airport has a strong stream of passenger flow. With terminal entrance checkpoints added to the first line of security, our numbers are well over 70 million times two. However, since the original planned capacity was upgraded to 38 million, the rest of the upgrades since then have had to be done within the same environment and looped in. For example, when security scanners or explosive trace detection systems were implemented, this was done without expanding space towards the shops in the duty-free area but by tightening up each security operation area. So, as the airport needed to adapt, operations also had to adapt accordingly. Cargo buildings were added, the government VIP and officials guest house were expanded, a new



terminal was built, the tarmac area entrance was moved for optimisation purposes and ten new passenger boarding buildings were created – just a few of the changes applied to meet demands. Naturally, this growth rate and increase in volume demanded an expansion of the workforce along with requiring more sophisticated operation modes. Accordingly, since 2010, staff numbers have risen from 1500 to 2000. Although the staff numbers are increasing steadily, they do not match the fast rise in passenger numbers. That said, the law enforcement population fell from 1250 to 900, and their responsibilities were reduced.

To satisfy the needs of the industrial growth, personnel numbers needed to grow accordingly. An increase in staff numbers, as in many things, came with its advantages and disadvantages: running a tighter operation, requiring more training hours and instructors, better operations and business tracking, and developing more effective methods for almost everything. Last year, this represented roughly 40 000 hours of in-service training and almost 15 000 hours of computer-based training.

▼ The graph below shows the passenger peak times over a 24-hour scale. In 2013, there were an average of 9 peak hours during a day. Last year it was 15 hours and this year around 17. Istanbul is busy throughout the year.

The changes and advances in culture, technology and globalisation have meant high passenger volume graphics, which once belonged to certain periods. In this region, Umrah and a few other religious travels continue all year long. Then, if you add the holidays, summer and winter breaks, the continuous growth filling up the hours, the result is that less break times and less down times are available for staff to rest and for other activities, including personal and professional training, which is provided during shifts.

Even though TAV Security is a subcontractor and a subsidiary of TAV Airports Holding, this does not ease the company's burden. As a security company, providing security under the supervision of the law enforcement agency is a priority, and as a subcontractor of TAV Airports Holding, earning income is also another priority, which in itself prioritises something else: customer satisfaction.

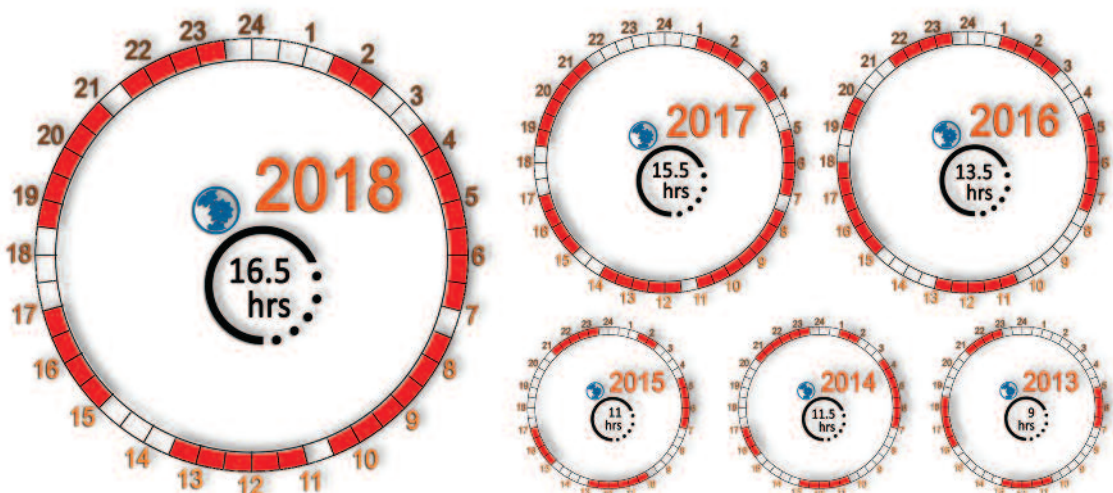
Security has a direct impact on the income of an airport today. Customer satisfaction in security more often translates as the fast and smooth passing of the customers through security checkpoints. As the Disney research suggests, experience itself is not as important as the memory of it. As a security company, we must provide security first – but do this for the State, as a subcontractor to the airport, as a subsidiary to TAV Airports under police supervision, and in a

very tightly operated environment with a customer satisfaction and security priority mindset.

There are also other challenges to mention here. The service and security standards required different measures to be applied in time. Without compromising quality and effectiveness, additional equipment was implemented with sometimes newer standard hardware, and with the less-expected events becoming reality the extra mile was needed and more tasks were added to operations.

After the coup attempt on 15 July 2016 and the terrorist attack on 28 June 2016, the State's reaction was strong. Everything was re-examined and questioned: turning airport security over to government branches, not allowing non-passengers into the terminal buildings, having security staff bear arms, screening all passengers for criminal record check – all these issues were discussed and the very existence of the private security concept was questioned. A joint effort was the key to overcoming a challenge of this proportion.

Under the leadership of the deputy governor, the operator TAV, State Airports Operator, and Turkish Airlines meet regularly. Security, ground services and airline collaboration plays a vital part in facilitating the entire operation. A new control centre and a centralised airport management communication system for delay-free communication were structured, passenger



## Managing passenger growth: a Turkish perspective on security



© Olivier Le Moal - AdobeStock

boarding bridges were shifted and passengers re-routed. Checkpoints were centralised. Moving the checkpoints to behind the passport control zone, S-shaped queue implementation in front of checkpoints and new technology investments in the passport control areas had a positive impact on passenger flow. When the passport police improved their operation time per passenger from 40 seconds to 15 seconds, this posed a new challenge for the security checkpoint since in all the simulations, a 40 second passenger interval was calculated for better, faster checkpoint operation. Supplementary checkpoint implementation in transfer zones and extensions were added.

Acquiring and managing the manpower is critical and everything comes down to people, human resources and management in the security business. Effective and efficient use of our current workforce, without compromising employee satisfaction, loyalty, performance and brand quality, is vital.

Finding security staff in Istanbul is not an easy task. The city is

expensive to live in, there is a high demand for security personnel – who are not out of a job for long, and aviation is not an easy branch of the security sector. The necessary manpower has to be attracted via layers of improved or restructured solutions, such as part-time work, voluntary overtime, zone supervisors, career planning, performance tracking and implementing a bonus.

The current employees were looking for opportunities, as many were also doing overtime at additional jobs in a very hard-to-commute city with less and less hours to rest. Implementing voluntary overtime helped by creating a win-win environment. As for part-time work, the answer was found by reaching out to universities, communicating with young adults, offering them a fully funded life experience and a career start. For two years' commitment in return, they have also been given time to specialise on the clock and flexibility to plan half their shifts as they need.

To manage growth, an organisation has to be proactive. Some of the studies conducted to aid in proactive applications of possible

solutions analysed the numerical data from previous years. Regional and seasonal peak periods regarding both passengers and employees were studied to ensure having all teams and equipment calibrated and ready for better response times. But of course, providing security for an airport is not just about running checkpoints.

Today, annual international passenger air traffic is 3.3 billion, which is expected to reach 6 billion in 2030. Cargo is forecast to increase from 50 billion tonnes to 125 billion tonnes. This means that our industry will be a much more important target for unlawful interference. For an already very important industry, which is at the heart of the economy for many countries, all States must work harder and together for its security.

Over the past five years there have been 69 security incidents, 21 of which resulted in fatalities and 884 people died. As the weapon of choice is still the improvised explosive device and the person-borne improvised explosive device, screening is extremely important in order to detect such items. But its implementation must be conducted effectively. The general public and passengers are obviously more vulnerable when there are less security restrictions, so airport landside areas are also sensitive areas, as recent events have underlined.

The key to succeeding in providing more secure airports may lie in collaborative decision-making and proactive solutions, not as a response but as a well-calculated intelligent set of measures. ■

After obtaining a bachelor's degree from the police academy in 1989, **Mansur Günes** earned his postgraduate degree from the *Université des Sciences Sociales* in Toulouse in 2002, on the sociology of the police. Mr Günes has been in public service since 1985 serving in various management positions from chief of police to the Secretariat of EU Affairs to Interpol.

After successfully completing his missions with the UN Peacekeeping Operations and the European Union, Mr Günes joined the private sector in 2006 as the security duty manager at Esenboga Airport in the capital of Turkey, with TAV Private Security Services Inc. In 2008, he was assigned as training, audit and security coordinator at Ataturk International Airport, Istanbul. He is still with TAV and has been the security manager at Ataturk Airport since 2016. Additionally, Mr Günes is a trainer, representative and consultant to several reputable organisations, including the national Association of Security Service Providers. He is a national auditor.

## Sustaining aviation benefits beyond borders

**Michael Gill**

*Executive Director, ATAG*



**Every day, an average of 120 000 flights carry 12 million passengers to their destinations at one of 3700 commercial airports around the world. We get so involved in the process of connecting people that we sometimes forget what our extraordinary industry does every day. Taking a step back and looking at the bigger picture, we realise that air transport's fast, reliable and affordable connectivity is indispensable for today's business, trade and economic growth. But to ensure that future generations can also benefit from air transport, the industry takes its environmental responsibility seriously to assure that aviation growth is sustainable.**

### **AVIATION BENEFITS WORLDWIDE**

The two key findings of ATAG's latest report *Aviation: Benefits Beyond Borders* are that global air transport supports 65.5 million jobs and USD 2.7 trillion in global economic activity.

Over 10 million people are directly employed within the sector – at airlines, airports, in air traffic management and aerospace manufacturing. Some 18 million jobs are supported through the indirect effects of aviation industry partners purchasing goods and services from other businesses and the induced impacts of our employees spending money and paying tax.

But the aviation sector has a far greater impact on the global economy than this. 57% of all international tourists and a third of world trade by value are transported by air. Whole businesses exist based on the very concept of rapid, global air transport. So, taking just the tourism activity enabled by aviation, nearly a further 37 million jobs are supported by the industry worldwide.

But aviation benefits are not just about the economy. The sector also has far-reaching social impact. Access to air services has grown substantially in the last decades and aviation is no longer reserved for the wealthy in the developed

world. An air ticket today costs passengers on average 70% less than it did in 1970. Small island States and remote communities in places that are impossible to reach by road or sea rely on air transport links for access to essential services such as health care and education. For goods requiring secure transport or special treatment, like medicines, the benefits of aviation are clear. Flying is certainly about our annual holidays, but it also enhances cultural exchange and understanding, allows us to visit family and friends and to access educational opportunities.

### **AVIATION BENEFITS IN EUROPE**

Accounting for the sector's direct impact, the effects of its supply chain, wage expenditure and tourism made possible by air transport, the sector in Europe supports an estimated 12.2 million jobs and a USD 823 billion contribution to gross domestic product (GDP). This represents 3.3% of employment and 4.1% of GDP in European countries. Every person directly employed in the European aviation sector and in tourism made possible by aviation supports another 4.7 jobs elsewhere. Similarly, for every USD 1 of gross value created by the air transport sector, USD 4.30 of economic activity is supported elsewhere in Europe.

### ► Two growth scenarios

The world's largest aircraft manufacturers estimate that demand for air transport will increase by an average of 4.3% per annum over the next two decades. That implies that demand for air travel will increase by a factor of 2.3 over the same period. If this growth path is achieved, the air transport industry will contribute 97.8 million jobs and USD 5.7 trillion in GDP to the world economy in 2036, including the direct, indirect and induced effects and aviation-enabled tourism.

However, what if we see a world marked by shifts in global trade policy, a tightening of restrictions on immigration, restraining policies on routes and the break-up of regional alliances? In other words, a retreat from the 70 years of internationalism that we have enjoyed since World War II. That is a scenario currently being played out on the front pages of newspapers all over the world. Estimated passenger growth rates under this scenario are halved and the ability of the industry to generate and support jobs is severely impacted, with 12 million fewer jobs and USD 1.2 trillion less economic activity per annum. And these are just the implications for aviation – the estimates do not include the damage done to businesses and entire sec-



“The world’s largest aircraft manufacturers estimate that demand for air transport will increase by an average of **4.3% per annum** over the next two decades. That implies that demand for air travel will increase by a factor of **2.3** over the same period.”

tors that rely on aviation to transport goods and passengers. A move towards a more fragmented world will make a considerable dent on the future benefits of aviation. More than ever, a liberalised world with open skies is crucial for aviation’s economic and social benefits to unfold.

### ► Aviation’s environmental responsibility

In any event, the economic and social benefits of aviation bring with them an environmental responsibility. For aviation to grow sustainably, it is vital that the industry balances the advantages of growth with the responsibility to pursue climate change action.

#### THE INDUSTRY’S CLIMATE ACTION GOALS

Ten years ago, industry leaders gathered to adopt the first global agreement from any transport sector to limit CO<sub>2</sub> emissions. The industry’s climate action plan is based on three global goals: first, to achieve a 1.5% annual fuel efficiency improvement from 2009 to 2020 (a goal which is already being surpassed, with an average improvement of 2.1% per year); second, to stabilise net CO<sub>2</sub> emissions at 2020 levels through carbon-neutral growth; and third, to reduce net emissions to 50% of what they were in 2005 by 2050. To meet these goals, the industry has put in

place a collective strategy based around aircraft technology, operations, infrastructure and market-based measures.

#### EFFICIENCY THROUGH TECHNOLOGY, OPERATIONS AND INFRASTRUCTURE

Aviation has always had a focus on efficiency, as economic and environmental motivations are intertwined. Aircraft and engine manufacturers spend an estimated USD 15 billion each year on research and development of new technologies, representing a major investment in the sustainable future of air travel. On average, each new generation of aircraft is roughly 15% to 20% more efficient than the previous generation.

The operations pillar of the industry’s climate action strategy aims at flying aircraft in a way which maximises fuel efficiency. Airlines have invested heavily in cutting non-flight-critical weight by, for example, installing lightweight seats. Adapted wingtip technology reduces drag and fuel consumption and has lowered fleet-wide CO<sub>2</sub> emissions by over 80 million tonnes since 2000.

Improving navigational systems and procedures ensures that aircraft are guided through the air as directly and fuel-efficiently as possible. For aircraft to navigate seamlessly across national borders, greater harmonisation of airspace is needed, and the industry calls upon European governments and

institutions for increased commitment in this area to complement and facilitate the efforts underway by the industry. Thus, the Single European Sky ATM Research (SESAR), part of the vision to consolidate European airspace into a single zone, is estimated to deliver a 12% reduction in environmental impact alone through savings of 948 to 1575 kilograms of CO<sub>2</sub> per flight.

#### THE IMPORTANCE OF SUSTAINABLE AVIATION FUELS

Alongside new technology, sustainable aviation fuels (SAF) will be the deciding factor in allowing aviation to continue its sustainable growth journey in the long term. SAF can be up to 80% less carbon-intensive over its life cycle compared to fossil-based fuels. By 2025, we could see 2% of all aviation fuel coming from sustainable sources. This is achievable but will require huge commitment all round. A number of airlines and airports, including in Europe, have taken a strong lead and made significant investments in SAF. Now, the industry counts on governments to give green air transport the same priority treatment as green ground transport. Governments play a crucial role in de-risking initial investments in SAF and assisting with expertise and financial support for the vital technical certification process, thereby paving the way for production and regular commercial deployment.

#### A UNIQUE OFFSETTING SCHEME (CORSA)

The industry has made significant technology, operational and infrastructure advances to reduce carbon emissions. However, to achieve our mid-term goal of carbon-neutral growth from 2020, the sector has called on the world's governments, represented at ICAO, to put in place a global market-based measure for aviation. Under the ICAO Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) – the world's first global carbon mechanism for any industrial sector – flights will offset over 600 million tons of CO<sub>2</sub> per year between 2021 and 2035. This makes CORSA one of the largest carbon-pricing instruments in the world as far as greenhouse gas emissions coverage is concerned.

Aircraft operators started monitoring fuel use and CO<sub>2</sub> emissions under CORSA from all international flights on 1 January 2019. Their level of preparedness for the scheme is encouraging. Despite many questions arising – this is the first time such a global system has been attempted – the industry is on the right track to meet its obligations under CORSA. Govern-

ments must also be ready to play their role and the industry encourages all States to show climate leadership by standing unified behind the implementation of CORSA and avoiding a patchwork of regulatory measures.


#### ▶ Developing a sustainable future

The aviation industry is expected to grow significantly in the coming decades in all parts of the world. The growth in traffic and connectivity will have an important impact on the jobs and economic activity supported by air transport, not least in developing and emerging economies. Aviation will continue to drive development and safe, reliable and cost-effective air transport will help achieve the United Nations 2030 Agenda for Sustainable Development. From racking our brains over how to power aircraft with used cooking oil to urban waste, to the latest developments in electric propulsion, to implementing CORSA, the industry is on an exciting journey towards a sustainable future – please join us. ■

Find out more about aviation benefits and the industry's environmental responsibility

› [www.aviationbenefits.org](http://www.aviationbenefits.org) and [www.enviro.aero](http://www.enviro.aero)

**Michael Gill** is Executive Director of the Air Transport Action Group (ATAG), the only global association that represents all sectors of the air transport industry. Its mission is to promote aviation's sustainable growth for the benefit of global society. He was appointed as Director, Aviation Environment of the International Air Transport Association (IATA) in November 2013, with responsibility for developing and implementing IATA's work in the environment field, particularly in the areas of climate change, noise, biofuel commercialisation and the IATA environmental assessment programme. Prior to that, he spent six years as senior legal counsel in IATA, supporting IATA's external affairs portfolio. In that role, he led IATA's delegation to three ICAO diplomatic conferences on airline regulatory and security issues. Before joining IATA in May 2007, Mr Gill was an aviation lawyer in private practice at the Paris Bar, acting for airlines and their insurers. He holds law degrees from both King's College, London and the Sorbonne University in Paris, as well as a master's degree from the University of Edinburgh. He is admitted as a solicitor of the Supreme Court of England and Wales and an *avocat* in France.



# NEWS FROM ECAC & JAA TO

- › ECAC in brief
- › EoP/CA in brief
- › News from the JAA TO



From left to right: Abdulnabi Manar, Director General of the Arab Civil Aviation Organization (ACAO); Jaime Binder Rosas, Secretary of LACAC and Salvatore Sciacchitano, (then) Executive Secretary of ECAC.

## ▶ ECAC joins Directors General from Latin America at LACAC's 23<sup>rd</sup> Assembly La Habana, 19-21 November 2018

ECAC Executive Secretary Salvatore Sciacchitano represented ECAC at the 23<sup>rd</sup> General Assembly of its sister regional organisation, the Latin American Civil Aviation Commission (LACAC), in La Habana, Cuba.

In his keynote address, Mr Sciacchitano recalled the excellent cooperation LACAC and ECAC have enjoyed in the aviation field since the signature of the Memorandum of Understanding between the two organisations in 1998.

He highlighted the efficient consultation process the two regional organisations have established during ICAO assemblies and how this contributed to the

adoption of the resolution on the Carbon Offsetting and Reduction Scheme for International Aviation (COR-SIA), one of the main outcomes of the 2016 Assembly. In this regard, Mr Sciacchitano underlined ECAC's availability to establish cooperative initiatives with LACAC to support the implementation of CORSIA.

LACAC's 23<sup>rd</sup> General Assembly also saw the election and appointment of a new President and a new Secretary. Mr Sciacchitano congratulated *Presidente del Instituto de Aeronáutica Civil*, Mr Armando L. Daniel López (Cuba), on his election as LACAC President, and Mr Jaime Binger (Chile) on his appointment as LACAC Secretary.

## ▶ ECAC moderates discussions on capacity building at ICAO Global Aviation Security Symposium 2018 Montreal, 27-28 November 2018

In the build-up to the Second High-Level Conference on Aviation Security (HLCAS/2, 29-30 November 2018), ICAO organised the second edition of the Global Aviation Security Symposium (AVSEC2018) at its headquarters in Montreal on the theme "AVSEC information sharing – the need to know". Opened by Secretary General Fang Liu, the aim of the Symposium was to allow senior leaders in the aviation security community to explore how to balance the need to protect security sensitive information with the need to share relevant information with the appropriate stakeholders who can benefit from such information. ECAC Deputy Executive Secretary, Patricia Reverdy, moderated a session



From left to right: Denis Chagnon, Aviation Strategies International; Patricia Reverdy, ECAC; Chris Ford, Civil Aviation Authority of New Zealand; Oscar Rubio, National Aviation Security Authority, Argentina; Eleanor Travers, Irish Aviation Authority; Luvuyo L. Gqeke, South African Civil Aviation Authority; and Kyal Barter, ICAO.

focusing on capacity building, a process critical to the implementation of the Global Aviation Security Plan (GASeP) objectives.

## ▶ European priorities at the ICAO High-Level Conference on Aviation Security Montreal, 29-30 November 2018

**ECAC** Executive Secretary Salvatore Sciacchitano and Deputy Executive Secretary Patricia Reverdy led the ECAC delegation at the ICAO Second High-Level Conference on Aviation Security (HLCAS/2) held in Montreal on 29-30 November.

Three working papers reflecting the current European priorities in the field of aviation security were presented to the conference on behalf of all 44 ECAC Member States. The objective of the first paper, dedicated to capacity building, was to have ICAO map existing schemes and activities and ensure the necessary political commitment from receiving States.

The goal of the second paper, focusing on insider threat, was to reinforce the relevant provisions in Annex 17 through a multi-layered approach including the promotion of security culture by States and industry.

Finally, the objective of the last paper, dedicated to the ICAO Universal Security Audit Programme (USAP), was to ask ICAO for a fundamental review of the USAP, aimed at ensuring USAP's part in the success of the implementation of the Global Aviation Security Plan (GASeP).

All three papers received significant formal support during the conference by delegations from other regions than Europe, and especially those dealing with insider threat and the USAP. This wide support was reflected in the conference's conclusions and recommendations, which are referred to in the Communiqué publicly accessible on the ICAO website. The conference conclusions and recommendations will be submitted to the ICAO Council for consideration ahead of the 40<sup>th</sup> ICAO Assembly in 2019.

## ▶ European safety experts examine the general aviation safety investigation process Valletta, 13 November 2018

On 13 November, ECAC's Accident and Incident Investigation Expert Group (ACC) organised a workshop in Malta to address the process of safety investigation for general aviation (GA). The workshop was hosted by the Maltese Bureau of Air Accident Investigation. Forty-seven participants from 21 ECAC Member States, manufacturers, airline representatives, EASA and the European Commission participated.

General aviation events are more frequent than large aircraft accidents, so all safety investigation authorities have some experience in this area. General aviation accident investigation raises specific issues, both from an organisational point of view (how to manage a comparatively higher number of investigations, how to set priorities...) and from a technical point of view (how to retrieve technical data without dedicated flight recorders...).

Moderated by ACC chair Robert Carter (United Kingdom), the purpose of the workshop was to look at the investigation of GA accidents within ECAC Member States, and the potential for increased cooperation between safety investigation authorities. Featuring presentations and case studies and with a strong emphasis on discussion and exchange, it explored how investigations are managed and resourced, and how



the results are reported. Presentations on novel and emerging technologies, recorded data flight-testing and human performance gave the participants a good insight into how the accidents are investigated, the challenges encountered and where to find help when needed.

A reference document reflecting the key issues discussed at the workshop will be drafted and presented to the ACC Group of Experts at its first meeting in 2019.





## ► ECAC Directors General discuss the challenges of aviation growth

Paris, 4 December 2018

Over 60 high-level delegates from 29 ECAC Member States, EASA, EUROCONTROL, the European Commission and ICAO assembled with special guest speakers for the 11<sup>th</sup> annual ECAC Forum of Directors General.

The ever-increasing demand to fly has led to a boost in traffic and puts the responsibility on all civil aviation stakeholders to expand in a sustainable manner to avoid losing the benefits of growth. This year's Forum set out to explore solutions that have been, or could be, put in place to tackle the challenges created by the expected growth in the aviation sector.

Spread across three sessions, the discussions were expertly led by moderators Silvia Gehrler, Director General International (Austria), Halla Sigurdardottir, Deputy Director General (Iceland) and Flor Diaz Pulido, Head of Unit for Aviation Policy at the European Commission's DG MOVE.

Joe Sultana (EUROCONTROL) set the scene in the first session presenting the aviation growth forecasts to 2040 and the main constraints on infrastructure and safety, while Stephen Perkins (International Transport Forum) offered a global overview of civil aviation growth.

The second session explored experiences at the national and local levels from the perspective of Member States, industry and NGOs, and how these stakeholders are seeking to find a balance between growth and the socio-economic, safety and environmental needs. Michael Gill (ATAG) gave the air transport industry's perspective, highlighting the importance of a collaborative approach involving all stakeholders, while Olivier Jankovec (ACI EUROPE) spoke about coping with the challenges of airport capacity growth. Tim Johnson (Aviation Environment Federation) presented the challenges of balancing environmental priorities with growth, drawing attention in particular to the effects of noise on health.



Luis Ribeiro (DGCA Portugal) gave his State's perspective on guaranteeing safety in times of high traffic growth, while Michal Witkowski (CAA Poland) focused on the growth and infrastructure constraints at Polish airports. Dan Micklethwaite (DGCA United Kingdom) presented the case of the planned Heathrow Airport expansion and the proposed environmental and communities package to support local communities and mitigate the environmental impact of growth on them. He also highlighted the importance of sharing the benefits of growth with local communities.

In the third and final session, Jonathan Wober (CAPA – Centre for Aviation) and Stephen Perkins proposed potential solutions to address the environmental, infrastructure, capacity, and technological challenges raised during the debates and thus sustainably accommodate the forecast growth in the sector.

Throughout the day, the Forum provoked lively debate and offered much food for thought. Key conclusions included the need for the sector to communicate better and be more self-confident in presenting the positive and beneficial aspects of aviation growth, that sustainability should be at the centre of all decision-making and connected to all aspects of aviation matters, and that it is critical for regulators and stakeholders to cooperate closely to ensure the benefits of growth are widely shared.

## ► End-of-year meeting for ECAC's Directors General of Civil Aviation Paris, 5 December 2018

Directors General were joined by observers EASA, the European Commission, the ICAO EUR/NAT Office and JAA TO for their last meeting of the year at the ECAC premises in Paris.

They heard reports from the Focal Points (members of the Coordinating Committee appointed to be responsible for leading specific fields of ECAC activities) on achievements in 2018 in the fields of safety, accident investigations, environment, security and facilitation, as well as on economic and legal matters. It was also the occasion to share a brief summary of the conclusions reached at the previous day's 11<sup>th</sup> ECAC Forum. The end-of-year reporting included the topics under discussion in the various ECAC working groups, their achievements so far, and the priorities for 2019.

With the 40<sup>th</sup> ICAO Assembly scheduled in September 2019, these priorities are designed to reflect the dossiers ECAC Member States will want to address in

the global forum. Common positions and strategy in view of next September's Assembly were therefore discussed at length.

Directors General also received updates on the status of current aviation topics at the European Union level, with briefings from the (then) current (Austria) and future (Romania) EU Council Presidencies as well as the European Commission itself. EASA provided an overview of its environmental resources and expertise, and the role it can play to strengthen and add value to the European processes.

The meeting was pleased to welcome newly appointed Director General of Civil Aviation for Armenia, Tatevik Revazyan, and conveyed best wishes to Silvia Gehrler, Director General of Civil Aviation for Austria (International) who would join the ICAO EUR/NAT Office in Paris as Regional Director as from 1 February 2019.

## ► ECAC represented at 30<sup>th</sup> AFCAC Plenary Session Livingstone, 4-5 December 2018

The 30<sup>th</sup> Ordinary Plenary Session of the African Civil Aviation Commission (AFCAC) was held in Livingstone, Zambia, on 4 and 5 December.

As is customary for regional assemblies, the 'sister' organisations – the Arab Civil Aviation Organization (ACAO), ECAC and the Latin American Civil Aviation Commission (LACAC) – were invited to address their counterparts. Haydar Yalçın, Deputy Director General for Turkey, represented ECAC at the event, delivering a speech in the opening ceremony that focused on intensified cooperation between the two continents.

Over the course of two days, AFCAC Member States deliberated on issues that will be at the core of the AFCAC Work Programme for the triennium 2019-



2021. African Directors General of Civil Aviation also elected the new Bureau of the Commission. ECAC is pleased to congratulate Gabriel Lesa (Zambia) and Tefera Mekonnen Tefera (Ethiopia) following their appointment as President and Secretary General respectively, and looks forward to cooperating with them.

## ► ECAC organises regional workshop on CORSIA implementation in Turkey Istanbul, 13-14 December 2018

On 13 and 14 December, ECAC organised an ICAO 'ACT CORSIA' (Assistance, Capacity-building and Training programme) regional workshop in Istanbul, in line with the commitment in ECAC's Bratislava Declaration of September 2016 to implement CORSIA in all 44 ECAC Member States and to address the arising needs for capacity building.

The workshop was organised with the support of the German Environment Agency (UBA), which provided three trainers, the ICAO EUR/NAT Office, which provided one trainer and the ICAO ACT CORSIA training material, and the Turkish Directorate General of Civil Aviation, which hosted the workshop at the Turkish Civil Aviation Academy. Representatives of Albania, Armenia, Azerbaijan, Moldova, Serbia, the former Yugoslav Republic of Macedonia and Turkey attended.

## ► News from the Secretariat and the ICAO Europe and North Atlantic Office

### Departure of the ECAC Executive Secretary

At the end of last month, ECAC staff said goodbye to Executive Secretary Salvatore Sciacchitano, whose eight-year tenure came to an end on 31 January. Since 2010, Mr Sciacchitano's commitment to supporting the



44 Member States, developing ECAC's activities, strengthening relations with regional and international organisations, and improving efficiency has contributed to a greater stability and continuity for the organisation. Mr Sciacchitano is not leaving the ICAO family, however, as he joins the ICAO Council in Montreal in February as head of the Italian delegation. We wish him the very best in his new functions!

### New Regional Director at ICAO EUR/NAT Office

ECAC is delighted to welcome the new ICAO Europe and North Atlantic (EUR/NAT) Regional Director, Silvia Gehrler, who took up her functions in the Paris office on 1 February. Prior to becoming Regional Director, Ms Gehrler served as Director General International at the Austrian Ministry for Transport, Innovation and Technology, and was a member of the ECAC Coordinating Committee and Focal Point for Economic matters. ECAC looks forward to cooperating with Ms Gehrler and wishes her every success in her new role.



## ► Events to come

### FEBRUARY

- 21/ 1<sup>st</sup> meeting of the European coordination group on economic matters (ECG-ECO/1), Brussels
- 25-26/ 6<sup>th</sup> Europe – Asia-Pacific Aviation Security Forum, Paris
- 26-28/ 12<sup>th</sup> Best Practices for Cargo Inspectors Course (BPCI/12), Istanbul

### MARCH

- 5/ 55<sup>th</sup> meeting of the ECAC Medium-Term Objectives Task Force (EMTO/55), Paris
- 6/ 5<sup>th</sup> meeting of the European Safety and Air Navigation Coordination Group (ESANCG/5), Brussels
- 7/ 47<sup>th</sup> meeting of the Facilitation Sub-group on Immigration (FAL-IMMIGRAT Sub-group/47), Paris
- 11-12/ 1<sup>st</sup> EaP/CA mentoring activity on national aviation security programmes (EaP/CA/AVSEC Mentor/1), Paris
- 12-13/ 30<sup>th</sup> meeting of the Aircraft Noise Modelling Task Group (EAEG-AIRMOD/30), Toulouse
- 13-14/ Workshop on Explosive Detection Dogs, Paris
- 18-22/ 3<sup>rd</sup> EaP/CA Best Practices for National Auditors – Level 1 training, Kyiv
- 21/ 57<sup>th</sup> meeting of the Facilitation Working Group (FAL/57), Paris
- 21-22/ 40<sup>th</sup> meeting of the Training Task Force (TrTF/40), Bodrum
- 26-27/ 2<sup>nd</sup> Basic Aviation Security Training (BASIC/2), Paris

- 27/ 184<sup>th</sup> meeting of the Coordinating Committee, Paris
- 28/ 23<sup>rd</sup> meeting between the Coordinating Committee and the US authorities, Paris

### APRIL

- 9/ 6<sup>th</sup> meeting of the European Safety and Air Navigation Coordination Group (ESANCG/6), Brussels
- 24/ 41<sup>st</sup> meeting of the Common Evaluation Process (CEP) Management Group (CEP-MG/41), Paris
- 29-30/ 47<sup>th</sup> meeting of the Guidance Material Task Force (GMTF/47), Paris

### MAI

- 6-7/ 152<sup>nd</sup> meeting of Directors General of Civil Aviation (DGCA/152), Paris
- 9-10/ 41<sup>st</sup> meeting of the Training Task Force (TrTF/41), venue tbc
- 13/ 8<sup>th</sup> meeting of the Economic Working Group (ECO/8), Paris
- 14/ 4<sup>th</sup> meeting of the Network of Chief Economists (NCE/4), Paris
- 21/ 50<sup>th</sup> meeting of the Air Accident and Incident Investigation Group of Experts (ACC/50), Derby
- 23-24/ 32<sup>nd</sup> meeting of the Study Group on Cyber Security in Civil Aviation, Helsinki
- 24/ 7<sup>th</sup> meeting of the European Safety and Air Navigation Coordination Group (ESANCG/7), Brussels
- 28-29/ 27<sup>th</sup> meeting of the Security Forum, Lisbon

## ▶ Workshop on training and certification for aviation security staff Paris, 28-29 November 2018

An ECAC workshop on security staff training and certification was organised at ECAC's offices in Paris in the framework of the EU-funded EaP/CA Project.

Featuring a combination of lectures and breakout sessions, the workshop was designed to strengthen participants' understanding of the key elements of a robust training and certification regime in the field of aviation security.

Over two days, the 13 security experts from seven Partner States explored a number of areas of interest. Issues covered included a review of the ECAC National



Civil Aviation Security Training Programme and National Screener Certification Programme models. Participants also had the opportunity to share their experiences of organising and implementing training and certification of aviation security staff in their respective States.



## ▶ Workshop on cargo and mail screening Luxembourg, 7-8 November 2018

In the framework of the EU-funded EaP/CA Project, the European Civil Aviation Conference (ECAC) organised a workshop on cargo and mail screening on 7 and 8 November 2018 in Luxembourg.

The main objectives of this workshop were to explain in detail the various screening methods applicable to cargo and mail shipments, identify the challenges in this area and provide guidelines on how to mitigate them. The workshop also presented best practices with regard to quality control of screening to be performed at national and entity level.

The workshop was organised by ECAC in cooperation with the Luxembourgish Civil Aviation Authority (*Direction de l'Aviation Civile de Luxembourg*) and joined by participants from Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova and Ukraine. While strengthening their understanding of the screening requirements applicable to cargo and mail, the event also provided an opportunity to observe the implementation of screening procedures at LuxairCARGO, one of the largest cargo hubs in Europe.

## ▶ Training for cargo inspectors at Schiphol Airport Amsterdam, 29-31 January 2019

The third training course on best practices for cargo inspectors was conducted from 29 - 31 January at Schiphol Airport.

The three-day activity, facilitated with the assistance of the National Coordinator for Security and Counterterrorism and hosted by the Royal Netherlands Marechaussee, provided experts from Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova and Ukraine with the opportunity to become familiar with international and European cargo and mail security requirements and best practices in conducting oversight activities in this field. Comprising a combination of training techniques, including practical activities, the course was designed to reinforce the participants' knowledge and skills in inspecting the implementation of cargo and mail security measures.



Thanks to the Royal Netherlands Marechaussee and Dnata air cargo, the course included a visit to a cargo regulated agent facility where participants conducted practical activities aimed at developing their expertise in monitoring the implementation of cargo and mail security measures.

## News from the JAA Training Organisation (JAA TO)

### ► JAA TO interviews chairman of the Board of Directors of ANAC Portugal

**Paula V. de Almeida, JAA TO Director**

Following the JAA TO training courses held in Lisbon over the past few years, and the Training Needs Analysis (TNA) project initiated in the fourth quarter of 2017 supporting all the ECAC Member States, JAA TO invited the chairman of the Board of Directors of ANAC Portugal, Luis Miguel Ribeiro, for an interview. Mr Ribeiro expanded on the vision and goals for future developments within the Portuguese CAA, and their collaboration with JAA TO. Happy reading!



### ► INTERVIEW Chairman of the Board of Directors of ANAC Portugal, Luis Miguel Ribeiro

**Following the JAA TO training courses held in Lisbon over the past few years, and the TNA initial project, how has your experience with JAA TO been so far?**

The collaboration between ANAC and JAA TO for the training courses held in Lisbon has been very positive. JAA TO is always available to find the best solutions to our requests, which allows us to have training on the dates that are convenient for the technical staff, with good trainers and at a reasonable price.

**Of all the JAA TO training courses held in Lisbon, which were the most useful to ANAC Portugal?**

The most recent experiences with JAA TO are those related to training on the State Safety Programme (SSP) and Safety Management Systems (SMS), for a specific group of technical staff. These courses were very valuable as ANAC was developing the National SSP and the National State Safety Plan, and there was a strong need to train our technical staff in these specific matters.

**Can you comment on the choice of the next JAA TO training courses ANAC Portugal will take? Why these courses? What are your expectations?**

We have been discussing with JAA TO about having a workshop on risk management and manage-

ment of change at our premises in Lisbon. The implementation of the national SSP needs to be more robust and the technical staff must have good skills to conduct the oversight/inspection and audits of the national service providers, in accordance with Annex 19 and with the new EASA Basic Regulation. We are expecting JAA TO to develop the workshop in line with our objectives and to provide a trainer with good knowledge of the subject matter.

**In terms of staff development, what future training needs do you foresee?**

We foresee three main areas of training needs in the short/medium term, in accordance with the expected developments at ICAO, EU and EASA in the civil aviation sector, and also in relation to the Portuguese CAA's specific needs: 1) SSP and SMS in application of the ICAO Standards and Recommended Practices (SARPs) and EASA regulation, which should include risk analysis; 2) implementation of the CORSIA SARPs and the new EU regulation on ETS; and 3) audit techniques. ANAC is also finalising its training plan for 2019 so it is likely that more training needs will be presented to us in the near future.

**What are the future vision and goals in terms of developments within the CAA?**

In pursuing its competences, ANAC is responsible for licensing, certifying, authorising and approving activities and procedures, entities, personnel, aircraft, infrastructures, equipment, systems and other means

used in civil aviation, as well as defining the technical requirements and assumptions underlying the issuance of the respective acts. ANAC also exercises the functions of regulation, oversight, supervision, surveillance, inspection and audit of the civil aviation sector and is governed by international, European and national law. In this context, capacity building of technical staff is a continuous need in order to implement new regulations and recommendations as well as to perform all the tasks related to the duties and functions of the CAA.

ANAC has recently implemented a new recruitment policy, which includes new careers, better terms of employment and an increase in salaries in order to attract and retain high-qualified professionals from the civil aviation sector and to compete with the service

providers in the sector. In this regard, ANAC has developed a detailed training plan for technical personnel, including initial and recurrent training.

ANAC, as one of the eight members of the Community of Portuguese-speaking civil aviation authorities (CAACL), is contributing to capacity building by providing some specific training courses as well as on-the-job training for the technical staff of several of those CAAs.

In conclusion, we are very attentive to developments in international regulation and in order to comply with our legal obligations and guarantee the highest safety standards in the civil aviation sector, we are committed to maintaining highly trained technical staff with the adequate skills to perform their tasks.



► **SECOND INTERVIEW** We also talked to Helena Faleiro, consultant to ANAC's Board, to learn more about her practical experience with JAA TO.

### ***How have you experienced the JAA TO training courses at your premises?***

In order to organise JAA TO training courses at ANAC's premises, the preliminary contacts were very useful and easy. The details in relation to the trainer, the dates and other aspects were negotiated by email or by phone directly with the persons in charge at JAA TO, and everything was easily agreed on. JAA TO is very flexible in arranging the right dates for the training courses and clearly understands the difficulties the CAA can have in relation to the rules and procedures we have to follow for contracts with external entities.

### ***Were there any challenges?***

There were, in fact, some challenges, mainly in relation to the programme we intended to implement and the available budgetary resources. Even in this aspect, JAA TO presented good and practical solutions.

### ***Were there advantages in hosting the training courses in-house?***

Annex 19 of the Chicago Convention, which is applicable to ICAO Member States, has a huge impact on the organisational structure of the civil aviation authorities. Consequently, it impacts the need to have highly qualified technical personnel. To ensure the maintenance of competence and to conduct surveillance or

safety oversight functions, it is necessary to develop a training plan for technical personnel, which includes initial and recurrent training, as well as SSP and SMS training.

In this regard, the in-house training courses have several advantages because of the high number of technical personnel who can benefit from these courses - between 20 and 25 people. It represents a cost per capita much lower than what would be necessary to move that group of people to training courses abroad.

### ***Do you recommend in-house training courses to other CAAs?***

If we are dealing with large groups of technical personnel, the advantages of hosting in-house training courses are very positive, as already mentioned. However, if we are dealing with very few people, it would be preferable for them to participate in training courses at the premises of JAA TO, where they can interact with staff from other organisations and benefit from the exchange of experiences.

### ***If you could go back, would you choose JAA TO again? Why?***

The experience with JAA TO has been very positive with regard to the training course content, the trainers' knowledge and the availability to find adequate solutions to fit our needs. Those are certainly added values that we will consider for the continuation of our work with JAA TO.

If your organisation or CAA is interested in requesting support from the JAA Training Organisation in preparing your annual training plan, including the development of customised training courses to take place at your location, please get in touch with your JAA TO sales representative at your earliest convenience.

**Please submit your request to:** <https://jaato.com/trainingoutside/>

**ECACNEWS** provides an overview of the activities of the European Civil Aviation Conference. ECAC makes no warranty, either implicit or explicit, for the information contained in this document, neither does it assume any legal liability or responsibility for the accuracy or completeness of this information.

Opinions expressed in signed articles are the author's opinions and do not necessarily reflect those of ECAC. Reproduction in whole or in part of all unsigned material is freely authorised. For rights to reproduce signed articles, please contact the ECAC Secretariat.





**ECACNEWS** is published by the European  
Civil Aviation Conference (ECAC)

---

FOR MORE INFORMATION,  
PLEASE CONTACT:

**ECAC Secretariat**

3 bis, Villa Emile Bergerat  
92522 Neuilly-sur-Seine Cedex FRANCE

Tel. : +33 1 46 41 85 44

Fax : +33 1 76 73 98 57

[secretariat@ecac-ceac.org](mailto:secretariat@ecac-ceac.org)

[www.ecac-ceac.org](http://www.ecac-ceac.org)

---