



The  
**ABIS** 2016  
**States**  
**at ICAO**



The ABIS Group  
at The International Civil Aviation Organisation

Shared Expertise, Strong Representation

Austria  
Belgium  
Croatia  
Ireland  
Luxembourg  
The Netherlands  
Portugal  
Switzerland



ICAO



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Published and edited by the  
ABIS Group Delegation to ICAO

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States from the ABIS Group have served on the Council of ICAO since 1947. Ireland, Luxembourg, The Netherlands and Portugal were, individually, founding member states of ICAO. It was only in 1980 however that the Netherlands, Belgium, Luxembourg and Switzerland decided to come together to form a group and share representation at ICAO. Austria and Ireland joined later and the group name became ABIS which remains still today. Portugal joined in 2008 and the newest ABIS member, Croatia, in March 2016 – *see feature article on page 3.*

The ABIS Group co-operates closely guided by principles established in its Memorandum of Understanding. Representation on the Council of ICAO and nominations for appointment to the Air Navigation Commission are by way of rotation among the ABIS States. The group demonstrates that shared representation at ICAO is effective and can benefit smaller and larger states alike where experience is shared and objectives pursued through active co-operation.

ABIS continues to strive to make positive contributions to the work of ICAO in its representation on the ICAO Council, in providing qualified experts to the Air Navigation Commission and to the various Commissions, Panels and Working Groups of ICAO. The ABIS Group is fully committed to ICAO's vision for an aviation sector which is safe, efficient, secure, economically sustainable and environmentally responsible.

All of the ABIS states are also members of the European Civil Aviation Conference (ECAC), an organisation of 44 states which seeks to harmonise civil aviation policies and practices among its Member States and to promote understanding between Europe and other regions of the world.

# ABIS BACKGROUND



# ABIS Welcomes Croatia

On the 22<sup>nd</sup> March, 2016, at the 105<sup>th</sup> meeting of the ABIS Group, The Republic of Croatia became the eighth member state of the ABIS Group.

Croatia is also the most recent new member of the European Union having acceded on 1 July 2013 and is a member of ICAO, ECAC, EUROCONTROL, EASA and FAB CE.

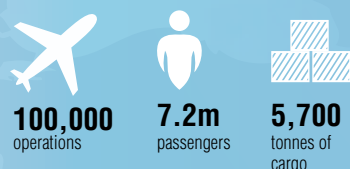
The Republic of Croatia brings to the ABIS Group a dynamic and vibrant civil aviation system with recent and positive experiences in major reform. Responsibility for civil aviation in Croatia is divided among three entities – the Ministry of Maritime Affairs, Transport and Infrastructure (DGCA), the Croatian Civil Aviation Agency and the Agency of Investigation of Aviation, Maritime and Railway accidents.

Croatia's highly developed network of 9 international airports caters to over 100 different air carriers during the busiest periods. These airports, and especially the coastal airports, serve the tourism industry and are major players in this economic sector. Seasonality due to high demand during the summer season is one of the major challenges facing the Croatian aviation industry and various measures have been undertaken to alleviate these adverse effects. Major investments, in excess of €500 million, in airport infrastructure are currently underway at Zagreb, Dubrovnik and Split airports.

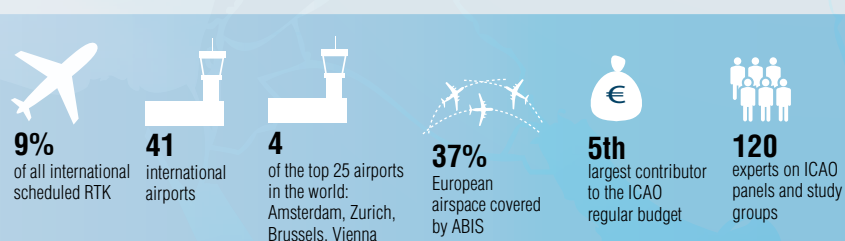
Croatia Airlines conducts the majority of domestic traffic in the Republic of Croatia with approximately 500,000 passengers and is also the major link to international destinations through its own network and its membership of Star Alliance.

## Croatia Quick Facts

### Total annual traffic 2015



## ABIS Quick Facts



## ABIS Representation on Panels & Groups of the Council

Panels	Groups	Committees	Commissions
Air Transport Regulation Panel	Environment Advisory Group	Committee on Aviation Environmental Protection	Commission of Experts of the Supervisory Authority of the International Registry
Airport Economics Panel	New Technology Working Group	Legal Committee	International Explosives Technical Commission
Air Navigation Services Economics Panel	Public Key Directory		
Aviation Data and Analysis Panel (formerly STAP)	Technical Group on Machine Readable Travel Documents		
Aviation Security Panel			
Facilitation Panel			

## ABIS Representation on Panels & Groups of the Air Navigation Commission



A wireframe model of a commercial jet aircraft is centered on the page, facing forward. The background is a dark green with various technical and engineering motifs, including circular patterns, lines, and a faint circuit-like pattern. The text 'made in' is in orange, and 'Austria' is in large white letters.

# made in Austria

## Innovative Aircraft Design

The Austrian aeronautics industry consists of more than 240 companies, according to the study "Austrian Aeronautics Industry: a Database of Market Participants".

More than 362,000 General Aviation (GA) aircraft fly worldwide - 103,000 are based in Europe and over 199,000 aircraft are based in the United States.  
(source: GAMA report)

Austria is playing an ever more important role in the aircraft design sector. The range of products and services provided by Austrian companies is extensive: from metal and fiber-reinforced components for large civil aircraft producers, to inspection systems, innovative flight control solutions and training programs. Austrian aviation companies are market leaders in Europe in the fields of light aircraft and engine manufacturing for General Aviation.

Diamond Aircraft is one such leading company, a system maker in the General Aviation sector. From research and development to production, marketing, sales and after sales – all of Diamond Aircraft's activities are carried out in Austria. Diamond Aircraft is one of the top three manufacturers worldwide based on the General Aviation aircraft delivery figures 2014 and is dominating the twin piston market.

### Fly Green and Smart

Innovation has been the key to success in Austria. In the past, the introduction of diesel powered piston aircraft revolutionized the General Aviation market. Today, with increasing fuel costs, the reduced availability of gasoline aviation fuels and especially with increased environmental awareness regarding emissions, everyone in the aviation industry is conscious of the need for fuel efficient and smart propulsion technology.



As part of the "Hybrid Electric Multi Engine Plane" (HEMEP) project, Diamond Aircraft is again one step ahead. Along with its consortium partners in this project, Diamond Aircraft will take a leading role by using electric propulsion systems in the field of aviation.

With a forecast of 5% annual growth in air traffic and the resulting increase in the number of aircraft flying, emission-saving innovations are in demand. Future aircraft generations will need to be highly fuel efficient and environmentally friendly.

### Aviation Safety is Fundamental

Continuous safety enhancements promote the viability and profitability of commercial air transport operations and maintain public confidence in air travel.

Diamond Aircraft has one of the most remarkable safety records in all of GA light aircraft. This is due to a combination of ultramodern safety avionics, a unique safety cell cabin made out of light and at the same time very strong composite materials, a smart fuel system protection design and safe handling characteristics.

Diamond Aircraft is actively involved in the eSAFE project (Emergency Safe Return for CS23 Aircraft) and from this expects a further increase in GA safety. The aim of the project is to develop a unique technique for automatic flight guidance inclusive of emergency landing in case of a pilot's sudden inability to fly or in the case of technical problems for EASA CS23 aircraft.

### Tomorrow's Technology in Airframe Design

Hand in hand with the goals of future aviation, such as flying green and smart but also increasing safety, goes the development of innovative materials for airframe design.

The ambition to increase fuel efficiency and to improve the aerodynamic performance of new aircraft is leading designers to move away from using aluminum in airframes. Instead today's latest planes like Airbus A380 and Boeing's 787 Dreamliner are made of a huge percentage of lightweight carbon fiber composites. Less weight means a

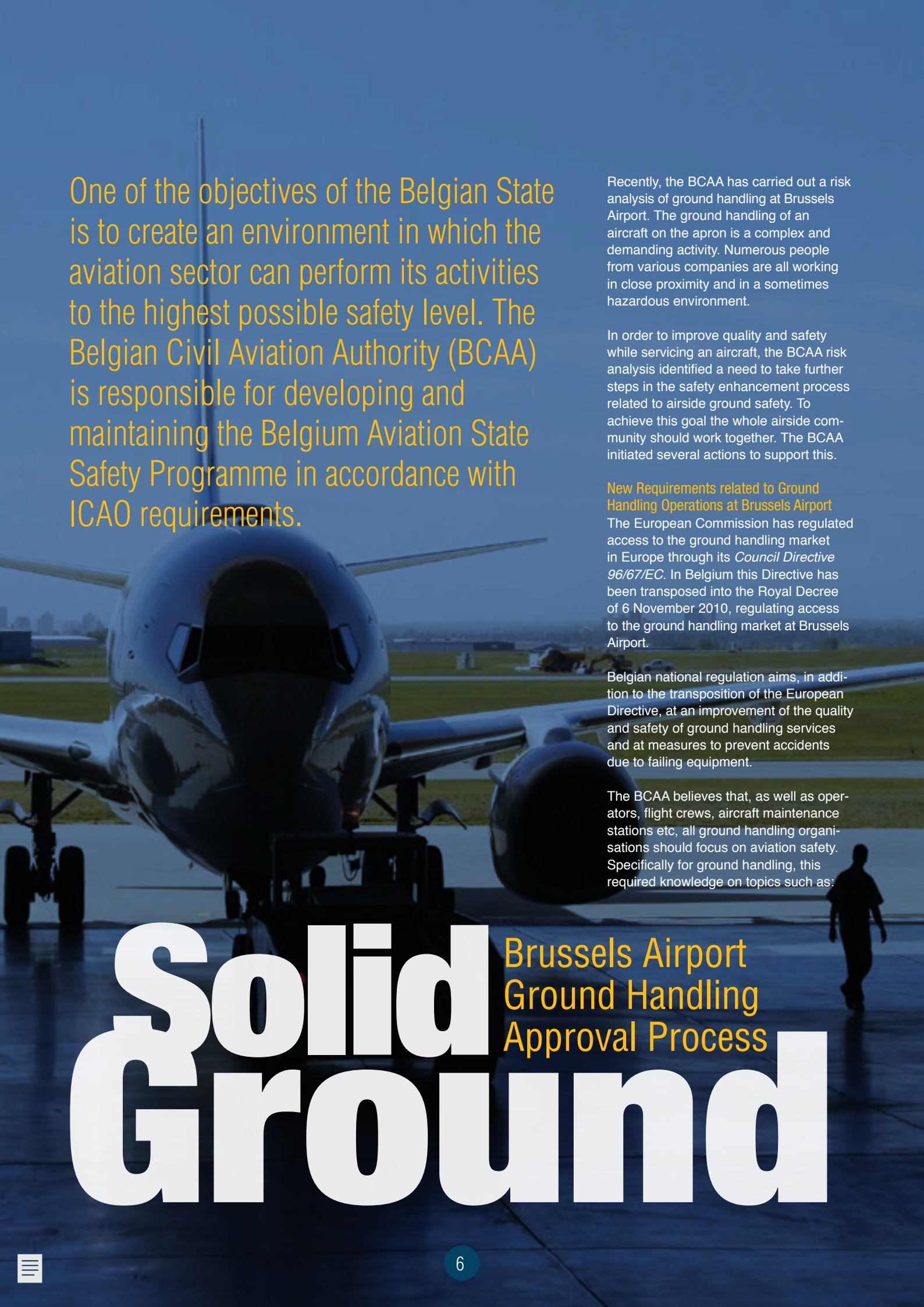
faster aircraft, lower fuel consumption and hence being able to fly longer without refueling.

Modern composite structures can also deliver safer airframes. Diamond Aircraft has established know-how in the use of this revolutionary material. With its unique safety cell cabin the company uses all the advantages of solid composite construction which is one of the reasons for its strong safety record in the industry.

General Aviation still faces complex challenges, from safety issues to environmental awareness and must always evolve in response. Innovative Austrian aviation companies are investing heavily in research and development to meet those challenges and overcome them, delivering a bright future for General Aviation.







One of the objectives of the Belgian State is to create an environment in which the aviation sector can perform its activities to the highest possible safety level. The Belgian Civil Aviation Authority (BCAA) is responsible for developing and maintaining the Belgium Aviation State Safety Programme in accordance with ICAO requirements.

Recently, the BCAA has carried out a risk analysis of ground handling at Brussels Airport. The ground handling of an aircraft on the apron is a complex and demanding activity. Numerous people from various companies are all working in close proximity and in a sometimes hazardous environment.

In order to improve quality and safety while servicing an aircraft, the BCAA risk analysis identified a need to take further steps in the safety enhancement process related to airside ground safety. To achieve this goal the whole airside community should work together. The BCAA initiated several actions to support this.

#### **New Requirements related to Ground Handling Operations at Brussels Airport**

The European Commission has regulated access to the ground handling market in Europe through its *Council Directive 96/67/EC*. In Belgium this Directive has been transposed into the Royal Decree of 6 November 2010, regulating access to the ground handling market at Brussels Airport.

Belgian national regulation aims, in addition to the transposition of the European Directive, at an improvement of the quality and safety of ground handling services and at measures to prevent accidents due to failing equipment.

The BCAA believes that, as well as operators, flight crews, aircraft maintenance stations etc, all ground handling organisations should focus on aviation safety. Specifically for ground handling, this required knowledge on topics such as:

# **Solid Ground**

## **Brussels Airport Ground Handling Approval Process**





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- Collision avoidance
- Correct aircraft refuelling
- Correct loading (taking into account the weight & balance limitations of the aircraft)
- Human factors
- Foreign object debris and corresponding damage
- The use and maintenance of ground support equipment

Concrete BCAA actions have resulted in 4 new publications: 2 Ministerial Decrees published at the end of 2014 and 2 BCAA Circulars.

1. Ministerial Decree (MD) on the approval of suppliers of ground handling services at Brussels Airport, published 19 November 2014, defines the criteria and the procedure for obtaining an approval for the provision of ground handling services at Brussels Airport. It requires ground handlers to establish a quality and safety management system, minimum arrangements for training and an incident reporting program. An in depth review of the financial situation of the company is also carried out by the BCAA. From 1 February 2016, any ground handling service provider or self-handler must be in possession of an approval issued by the BCAA.

2. Ministerial Decree on the approval of the maintenance programme for rolling stock and essential stock, as well as the conditions for roadworthiness testing of rolling stock at Brussels Airport, also published on 19 November 2014, sets the requirements for the approval of a

company's maintenance programme for its rolling stock and essential stock, also known as Ground Support Equipment, and the conditions for roadworthiness testing, maintenance and periodic inspection of this rolling stock.

3. The third element of the BCAA approach consists of the maintenance and renewal of centralized infrastructure. This is all infrastructure used for ground handling, provided and managed by the operator of Brussels Airport, Brussels Airport Company. Examples are the boarding bridges and the baggage sorting systems. Brussels Airport Company has developed a maintenance and renewal program for this centralized infrastructure, subject to approval by the BCAA. The details (requirements) can be found in the BCAA circular GH-01.

4. For an airport and its users it is essential to guarantee business continuity. When selected handlers are unable to provide ground handling services, the airline may operate as a self-handler provided that an agreement has been issued by the BCAA. Circular GH-02 from the BCAA determines the conditions for such a temporary self-handling agreement, including a detailed risk analysis and a prevention and emergency plan specifically for the activities the airline wants to perform during temporary self-handling.

### Future Challenges

Since 1 February 2016, 27 ground handling companies have received their approval for ground handling operations at

Brussels Airport. In the near future, another 4 companies will send in their approval request to start operations at this airport. In a second phase, prior to 1 August 2016, all ground handling service providers must submit a maintenance program for their essential stock (Ground Support Equipment) for approval by the BCAA.

In addition, the BCAA will set a program of continuous monitoring of the ground handling activities and companies. For this, the BCAA will carry out audits, verifications and inspections within the company. Some challenges remain however which have a direct impact on ground handling operations:

- Collaboration and interfaces: many stakeholders are active at the airport; in order to achieve quality and safety there is a need to work together and to establish clear interfaces between stakeholders;
- Airport growth: traffic at the airport is growing, which is positive from an economic point of view, but which is also a challenge from an operational and safety point of view.
- Expectations: passengers and airlines have expectations in terms of quality and safety at the airport. All necessary steps should be and are taken to meet these needs and expectations.
- Safety is a continuous challenge; Safety Management Systems should guarantee that despite all other challenges safety is always the priority.



# The Future of Global Flight Tracking Ireland

Ireland's air navigation service provider, the Irish Aviation Authority (IAA), is leading the way for a truly global flight tracking system as an investor in the ground breaking Aireon venture, along with other leading ANSPs and Iridium Communications Inc.

Aireon is deploying a global space-based ADS-B surveillance capability, providing direct air traffic control visibility of flights operating in all of the world's flight information regions, focused on improving the efficiency and safety of aircraft operations. When Aireon is fully operational, anticipated for 2018, it will create a powerful platform capable of tracking suitably ADS-B equipped aircraft around the globe in real time.

#### [Quantum Leap for Remote Air Traffic Surveillance](#)

The Aireon service will complement ground-based air traffic surveillance systems currently in use by giving a new independent surveillance layer world-wide and seamlessly relaying position and status information of aircraft flying

over oceans, polar and remote regions to air traffic control on the ground. This new capability is a quantum leap for remote surveillance, extending air traffic surveillance to the entire planet and enhancing safety, unlocking operational efficiencies and reducing fuel costs in remote and oceanic airspace.

Eamonn Brennan, Chief Executive, IAA said: "Aireon represents the future of air traffic surveillance. This supports our focus to deliver safe, innovative and cost-effective air navigation services to our customers on a global scale. Providing airlines with the most optimal trajectories and ensuring that they fly safely through our skies is paramount to our mission as a world class air navigation service provider".

"Aireon can deliver significant benefits to airlines flying in remote and oceanic airspace all around the world. By joining together with Canada, Italy and Denmark, we are creating a network of partners that understand the importance of satellite based surveillance and the benefits to every flight path across the planet".

#### [New Global Emergency Tracking Service Centre](#)

In 2015, as part of the Aireon services, the IAA was selected to manage a new global emergency tracking service centre that will provide accurate information on the location of suitably equipped aircraft anywhere in the world, known as Aircraft Locating and Emergency Response Tracking (ALERT) system.



Through ALERT, rescue agencies, air traffic control providers and airlines will then have accurate information on the location and last flight track of any aircraft using 1090 MHz Automatic Dependent Surveillance – Broadcast (ADS-B). This new technology will be fully operational in 2018.

The Aireon ALERT service is considered a crucial aircraft tracking service, which will greatly assist airlines, aviation

aviation bodies to help locate missing aircraft as fast as possible and is now mandated in ICAO Annex 6 Standards. The decision to locate the Aireon ALERT facility at the IAA's North Atlantic Communications Centre on the western seaboard of Ireland is judged to be an apt reflection of Ireland's unique history as a North Atlantic Air Traffic Control service provider since the 1930s. The Aireon ALERT service will be free of charge and available soon after Aireon's

## Aireon Aircraft Locating and Emergency Response Tracking (Aireon ALERT) service to be based at the North Atlantic Communications facility on the west coast of Ireland.

authorities, Air Navigation Service Providers (ANSPs) and Search-and-Rescue (SAR) agencies during emergency situations. At their request, on a 24/7 basis, it will be possible to provide users with the immediate 'last known' location of aircraft with tremendous accuracy through Aireon's global space-based air traffic surveillance system. This is something that's clearly identified as a priority in the ICAO Global Aeronautical Distress & Safety System (GADSS), is currently being sought after by the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), airlines and other

full deployment in 2018. Historical track data will be available to pre-authorized users, including Air Navigation Service Providers (ANSPs), airlines and search and rescue authorities, through Aireon ALERT where a concern exists in relation to an aircraft. The system can also provide real-time tracking of aircraft in distress on demand, provided ADS-B transmissions are still operational. Aireon and its partners are working with all aviation stakeholders, including ANSPs, airlines and search and rescue authorities to coordinate the operational implementation of the Aireon ALERT service.

Aireon offers a global surveillance solution. Using existing equipment, aircraft emit their position. This aircraft position information will be detected by the Aireon constellation of 66 low earth orbit satellites. The satellites are networked to one another and back to Earth, such that the aircraft position information can be downlinked to ANSP's.



# NO COUNTRY NO COMMUNITY

## The AviAssist Foundation in Africa



1995 saw the birth of what has grown into a well-respected safety support organization for aviation professionals in Africa.

"The foundations of AviAssist lie in the halls of ICAO building and were laid during the tenure of Bert Kraan as ABIS ICAO Council member for the Netherlands," AviAssist Foundation director Tom Kok explains. "Ever since those early days, we continue coordinating our activities closely with ICAO and other support providers."

In the two decades that have passed since, the AviAssist Foundation has developed a unique way of delivering its safety promotion. The Foundation's course portfolio continues to grow and consists of operational safety courses such as Airport Wildlife Management, Airport Rescue & Fire Fighting, Flight Data Management and Human Factors for Air Traffic Controllers. All support the priorities set out in the 2012 Abuja Declaration. Currently, there are no feasible in-country commercial alternatives to the Foundation's courses.

"We keep very low overhead costs by having staff and volunteers work from their home," Kok explained. "That way, we spend no money on office costs. Equally, we get almost all our tickets from the airline community that recognizes the value of the good quality safety support that AviAssist can provide."

"Our events are stocked with dedicated and highly qualified, practicing professional volunteers who want to make their own contribution to the kind of safety change they would like to see in Africa. We source them from organizations all over the world and feel privileged to co-operate with reputable organizations such as Amsterdam Airport Schiphol, Airports Council International and CANSO on that," Kok continued.

From the early days of AviAssist, the Netherlands Ministry of Infrastructure & the Environment has transitioned from being the originator to being one of the main clients of the Foundation. "As a Ministry, we are very pleased to see that the Foundation has managed to apply an important multiplier effect to our contract.

This means that a wide variety of organizations and companies have joined us over the years in using the services of the Foundation," Netherlands Director of Aviation Rob Huyser said. "Even more promising is that an increasing number of African companies and governments know to find their way to the Foundation for good quality and affordable support with their safety promotion."

Over the years, AviAssist has grown from courses focusing primarily on knowledge transfer, to courses with due attention to the understanding and application of learning. Two crucial instruments in that are the Foundation's social media channels and Africa's only magazine dedicated to safety, AviAssist's *SafetyFocus*. *SafetyFocus* relies on co-operation with the Flight Safety Foundation. The full colour, quarterly magazine goes out for free to professionals in 42 African countries and enables professionals and students in the courses to relate their knowledge and compare, contrast and work it in analogy. It also carries the brands of its supporters and advertisers to 59 countries. The Foundation is also the founder of Africa's only professional development conference on aviation safety, the fifth edition of which will take place in Zambia in November this year.

"2016-2017 will see further steps towards the inclusion of leadership skills throughout our program," Kok promised. "We will be bringing more administrative and interpersonal skills into our events to top up the traditional technical skills transferred in training courses. That way, we will start applying the multiplier effect to safety champions by supporting them as they apply their social influence to maximize the efforts of others to achieve a sustainably safe African aviation industry."



# LEFT BEHIND FELL BEHIND

## The Civil Aviation Community of Portuguese Speaking Countries



The Portuguese cooperation system is supported in two pillars, a bilateral and a multilateral one. On a multilateral level, the strengthening of privileged relations with the Portuguese-speaking countries goes largely by pursuing a policy of cooperation on training and capacity building seeking to promote synergies in the civil aviation sector.

### Portuguese Speaking Countries Civil Aviation Community "CAACL"

Based on a common language, historical and cultural similarities, the Civil Aviation Authorities of Angola, Brazil, Cape Verde, Guinea-Bissau, Mozambique, Portugal, S. Tome e Principe and East Timor, established in 2007, the "Portuguese Official Language Countries Civil Aviation Authorities Community", hereinafter designated as "CAACL". In 2015, Equatorial Guinea joined the Community.

Since the creation of the Community, cooperation has been focused in all the five strategic areas of ICAO and several initiatives have taken place, namely, on job training, capacity building, training courses, and assistance on projects in

different areas, such as, air transport and airport certification.

A Portuguese Civil Aviation Authorities Community website ([www.caacl.org](http://www.caacl.org)), has been developed, as a tool for sharing information on the main projects developed by the Community.

In summary, these initiatives have the objective to provide the tools and the information needed for the routine activities of the civil aviation professionals as well as, to give specific support to the civil aviation authorities, on certain aspects of safety, air navigation and security areas.

### The Relationship with ICAO

Under the umbrella of "No Country Left Behind" initiatives, the President of ICAO Council, Dr. Benard Aliu, during the second High Level Conference on Safety held in Montreal from 2 to 5 February 2015, invited the representatives of CAACL for a multilateral meeting. The main objective was to establish a forum to discuss, among other issues, a strategic plan on safety issues. During that meeting, the main points discussed were related to:

- The identification of the needs and the respective priorities of implementation; and,
- Leveraging the commonality of the Portuguese language, specifically to enhance training and capacity building within the Community.

Having in mind the strategic objectives of ICAO, technical assistance assumes a significant importance to ensure an adequate level of competencies of civil aviation authorities. The "No Country Left Behind" campaign highlights ICAO's efforts to assist States in implementing ICAO Standards and Recommended Practices (SARPs).

CAACL is actively involved in giving the Portuguese language the role it deserves in contributing for NCLB and, in this way, for the sustainability of the international civil aviation sector, in general.

Portugal and the other Members of CAACL through their respective Civil Aviation Authorities are engaged in actively pursuing their cooperation with ICAO, on its five strategic objectives.



# Ireland's Voice

ICAO Council  
Candidature  
2016



Ireland is proud to be a candidate for election to the ICAO Council for the period 2016 - 2019, representing the ABIS group. Ireland has a strong tradition and reputation in aviation which has been achieved in co-operation with its ABIS partners and in international co-operation through ICAO.



# IRELAND

## ICAO Council Candidate 2016

### Ireland's Historical Tradition in Aviation

Ireland's aviation history began almost 100 years ago. Uniquely positioned by its geography as an island in the north Atlantic, the first non-stop west to east transatlantic flight landed in the west of Ireland in 1919 and the first east to west transatlantic flight departed from just outside Dublin in 1928.

Ireland has been involved in aviation international co-operation since the beginning of ICAO itself. Ireland is a founding member of ICAO and Dublin was the location for the first North Atlantic Route Service Conference of PICAQ – the Provisional International Civil Aviation Organisation - in March 1946. Ireland

then served, in its own right, on the Council of ICAO from 1947-1959.

Ireland joined the ABIS Group in 1997 and served again on the Council from 2001-2004. More recently a representative from Ireland has served on the Air Navigation Commission from 2013-2015.



Above: PICAQ North Atlantic Route Service Conference, St. Patrick's Hall, Dublin Castle, Dublin, March 1946



Right: 103<sup>rd</sup> meeting of the ABIS Group in St. Patrick's Hall, Dublin Castle, Dublin, Friday, 11<sup>th</sup> September 2015



## Ireland's Connectivity



### Annemarie Smith Floch

Ireland's representative for election to the Council of ICAO

Annemarie has worked in the Aviation Services Division of the Irish Department of Transport, Tourism and Sport since 2015 with responsibility for aviation security, safety and market access policy, and international aviation relations.

From 2011 to 2014, Annemarie was Transport Attaché to Ireland's Permanent Representation to the EU in Brussels where she gained extensive experience of international as well as EU policy issues. During Ireland's Presidency of the Council of the EU in 2013, Annemarie was Chair of the EU Council Working Parties on Road Transport and Sport. During that time, she successfully led negotiations on behalf of the Council with the European Parliament. From 2008 to 2011, Annemarie oversaw the implementation of Ireland's largest ever capital investment programme for transport covering investment in airport, rail and road projects.

Annemarie holds a first class honours degree in history and politics from the National University of Ireland, Galway and a Masters Degree in European Studies from University College Dublin.



An Roinn Iompair  
Turasóireachta agus Spóirt

Department of Transport,  
Tourism and Sport

The Department of Transport, Tourism and Sport is responsible for ensuring that aviation practices and procedures in Ireland comply with best international standards; for promoting the development of a vibrant, competitive and progressively regulated aviation sector and for the provision of adequate airport infrastructure and competitive airport services.



The Irish Aviation Authority (IAA) is a commercial semi-state company responsible for the provision of air traffic management and related services in Irish controlled airspace, the safety regulation of the civil aviation industry in Ireland and the oversight of civil aviation security in Ireland. The IAA receives no State funding. Its revenues are generated through charges and fees raised from its airline customers and regulatory clients.



## Irish Aviation & Economic Growth



**Aviation Industry**

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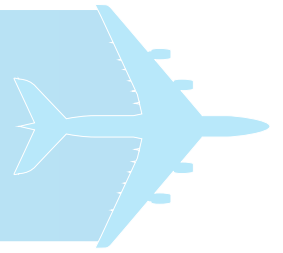
**€4.1bn**  
directly to GNP



**26,000**  
direct jobs



**16,000**  
jobs in the  
supply chain



**Aer Lingus**



**80**  
years in  
operation



**47**  
aircraft

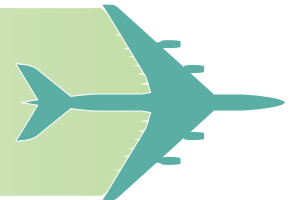


**Services**  
passenger &  
cargo

**UK  
Europe  
USA**



**IAG**  
member



**RYANAIR**



**350**  
aircraft



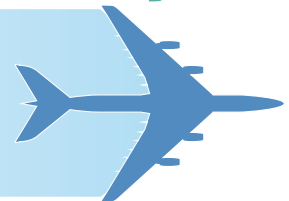
**Leading**  
low cost carrier  
worldwide



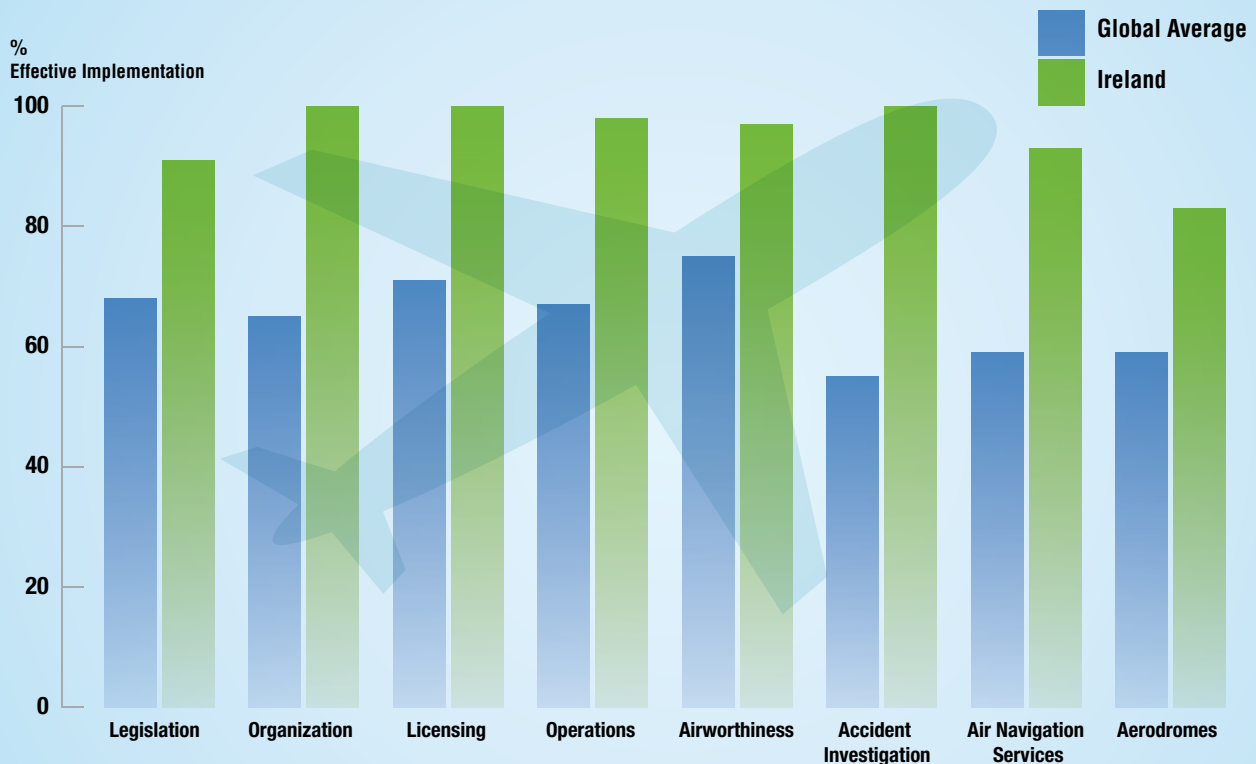
**200**  
destinations  
**32**  
countries



**100m**  
passengers  
in 2015



### Ireland's Safety Performance – ICAO Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA)



# Smart Charging

## Modulation of terminal air navigation charges in Luxembourg

In the European Union, a performance scheme for Air Navigation Services has been established to contribute to the sustainable development of air transport. The main objective of the scheme is to improve the overall efficiency of air navigation services across 4 key performance areas - safety, environment, capacity and cost-efficiency.

The regulations for the scheme apply to all EU Member states which provide air navigation services. However, States may decide not to apply the regulations to terminal air navigation services provided at airports with less than 70,000 Instrument Flight Rules (IFR) air transport movements per year.

Despite the fact that Luxembourg is not performing this number of commercial air transport movements per year, the regulations apply as a minimum to the airport with the highest number of IFR air transport movements per country. This is the case of Luxembourg Findel Airport.

### Implementation of the (EU) Regulations 390/2013 and 391/2013

Article 16 of EU Regulation 391/2013 offers the possibility to member states to modulate (or vary) air navigation service charges. The main reason why Luxembourg wanted to modulate its Terminal National Charges (TNC's) was to address ecological and environmental issues by incentivizing day time flights.

### Legal Context of Modulation of Air Navigation Charges

The EU Regulation allows Member States to modulate air navigation charges incurred by airspace users to reflect their efforts made in particular to:

- optimise the use of air navigation services;
- reduce the environmental impact of flying;

- reduce the overall costs of air navigation services and increase their efficiency, in particular by modulating charges according to the level of congestion of the network in a specific area or on a specific route at specific times.



Air navigation charges may also be modulated, on a non-discriminatory and transparent basis, to accelerate the deployment of Single European Sky Air Traffic Management Research capabilities.

### Economic Aspects of Luxembourg Proposal for Modulation of Charges Over the Reference Period 2 (RP2 2015-2019)

The formula which is used in order to modulate TNCs over RP2 is as follows:

#### Formula

$$R = U \times W \times E \times D \times \alpha$$

Result of TNC's      Unit rate      Weight factor (MTOW/50)<sup>0.7</sup>      Environmental factor      Day or night flight coefficient      Coefficient to compensate benefits or deficits calculated on the basis of year -2

The first part of the TNC formula (up to the weight factor 0.7) is identical to that referred to in Article 12 of the common charging scheme regulation.

#### Acoustic Groups

##### Environmental Factor "V"

CAT A (quietest)	$V \geq 10$	
CAT B	$7,5 \leq V < 10$	
CAT C	$5 \leq V < 7,5$	
CAT D (noisiest)	$V < 5$	

##### Environmental Factor "E"

CAT A	0,90	
CAT B	1,00	
CAT C	1,25	
CAT D	1,50	

The value "V" is obtained by dividing through the number of aircraft engines the difference between the aircraft maximum noise level value (see ICAO volume I of Annex 16) and the actual aircraft noise level value (cumulated noise values as shown on the aircraft noise certificate for lateral, approach and flyover noise levels). The value "V" obtained refers to the aircraft category.

#### Day flight coefficient "D"

##### Explanation for Day Coefficient

Take Off Time (local time)		
06:00 – 23:00 (day)	1.0	
23:01 – 00:00 (evening)	1.5	
00:01 – 05:59 (night)	2.0	

#### Potential Issues

The modulation of charges is designed to provide an incentive to change behaviour, e.g. to fly more during day time (in line with the "polluter-pays principle"). As a result, the revenues collected from airspace users could be higher or lower than without the modulation of charges for the same level of terminal SUs (TNSU).

#### Feedback and Conclusion

The new modulation TNC's charges has been in place for one year now in Luxembourg. The 2015 figures are not yet definitive, but it seems that the system put in place covers the estimated cost for the year.

Despite an increase of approximately 3000 commercial air transport move-

ments between 2014 and 2015, night flights fell by 5% in the same period which would seem to indicate that the approach of the modulation is bearing fruit.



# SCHIPHOL 100

This year, Schiphol turns 100 years old! In the past century, Amsterdam Airport Schiphol has grown to become a world player in the aviation industry. Schiphol now has a network of upwards of 300 international destinations that is used by nearly 60 million passengers each year. How did a small country like the Netherlands pull off such a feat?



The ground at Amsterdam Airport Schiphol was once a lake. In around 1850 the lake was drained, giving rise to a polder standing about four metres below sea level. In the First World War, the Dutch Ministry of War selected this polder as the location for the Schiphol military airfield. Its beginning was extremely modest: a small parcel of grass land of 12 hectares and four wooden hangars for materials and personnel. On 19 September 1916 the first aircraft landed at the airfield, marking the official start of Schiphol's history.

carrier KLM, which together with its SkyTeam partners, accounts for around 70 per cent of all flights.

#### Socio-economic Task

Amsterdam Airport Schiphol is operated by Schiphol Group. Schiphol Group is in the hands of four shareholders: the central Dutch government (69.8 per cent), the city of Amsterdam (20 per cent), the city of Rotterdam (2.2 per cent) and Aéroports de Paris (8 per cent). Schiphol Group has a socio-economic task: create value for the economy and

realising this ambition. What is the key to success?

This foundation lies in the 1980s. Together with the Port of Rotterdam, Schiphol was designated a 'Mainport' - international transport hub - in an effort to boost its competitive position and stimulate employment. What's remarkable about this vision is that it's shared. As such all parties involved - government, home carrier KLM, Schiphol Group and Air Traffic Control the Netherlands - collaborate closely. Each party does its

## A century of connecting the Netherlands

#### Courage and Ambition

Soon after the end of the First World War, Schiphol changed from a military to a civilian airfield. After a first few difficult years, development was rapid. With much courage and ambition, Dutch aviation pioneers built the airport's infrastructure and developed its destination network. And with success. What began with a couple of flights to London has developed as of 2016 into a network of 322 international destinations used by almost 60 million passengers each year. 300,000 people work for Schiphol either directly or indirectly.

A unique achievement from a global perspective and especially for a country of just 17 million inhabitants. This success is based on the hub concept, which has made Schiphol Europe's prime air travel transfer point. At the heart of this hub network lies home

society, both in the Netherlands and beyond. Hence our mission: 'Connecting the Netherlands'. Connecting the Netherlands with countless major international centres ensures that Dutch business people can easily do business overseas and foreign companies are eager to locate in the Netherlands. But this network of international connections also contributes to people's well-being by allowing them to travel to meet each other, work in different places and gain new experiences.

Schiphol is always aware of its impact on the environment, such as noise nuisance and air quality, and it endeavours to limit this impact as far as possible.

#### Key to Success

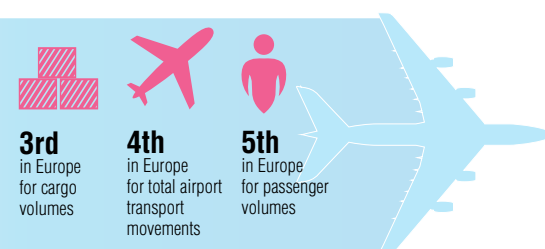
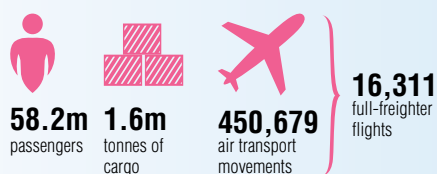
Amsterdam Airport Schiphol is hard at work to be Europe's 'Preferred Airport' and is making significant strides in

part to bolster the position of Mainport Schiphol, for example, by adding a valuable new destination to the network or constructing a new road to maintain Schiphol's accessibility.

#### The Future

Even at age 100, Schiphol is thriving and sparkling. Schiphol has plans galore aimed at ensuring its capacity keeps up with demand and further improving the quality of the airport. One of the goals Schiphol has set itself is to become one of the world's most sustainable airports. Schiphol is also investing heavily in digital tools for travellers and hopes to become the world's 'best digital airport' within a couple of years.

With so many ambitions to keep it busy in the next 100 years, Schiphol is far from finished with the future.



### Schiphol Airport facts and figures

# Liberalization Connectivity Growth

## the case of Portugal

### Liberalization of Market Access and Air Fares – Growth of Air Traffic

States in their relations within the international civil aviation sector have developed a bilateral framework on air services agreements based on the regulatory framework of the Chicago Convention. These agreements constitute the legal instruments binding the Parties and regulating the market access to the air carriers of each Party.

Bilateral air services agreements have evolved over the last seven decades by being more liberal or more restrictive, by allowing market access to various carriers of each Party without restrictions on capacity and on tariffs or by restricting the market access only to one carrier of each Party while fixing capacity and filing of tariffs.

In order to optimize connectivity a strong supporting framework is needed. This includes, among others, market access (e.g. liberalization)<sup>1</sup>. The initiative of States towards the liberalization of market access has been led by the US, in the 90s, with the conclusion of “open skies” agreements. These agreements were based on the principle of multi-designation of airlines and on the liberalization of 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> freedom traffic rights (passengers and cargo) and of 7<sup>th</sup> freedom (cargo). Also, in the early 1990s, within the European Community the creation of the single aviation market (liberalization of market access including cabotage) has deeply changed the international bilateral air services system and has created a new dynamic in aviation relations between States.

The ownership and control clause, which was one of the pillars of the bilateral air services agreements based on the principle of nationality has been also changed with its extension to nationals of the EU Member States/ or to the EU Member States. Thus, it allowed the establishment of air carriers whose ownership and control is held by nationals of the Member States/or by the Member States, in any Member State of the European Community.

The 3<sup>rd</sup> package liberalization policy also included tariffs, allowing the privilege of fixing tariffs on intra-Community routes to the Community air carriers, being only possible to the air carriers from third countries, on these routes, to follow the pricing practices of these community air carriers.

Later on, the ECJ judgments led to a change on the bilateral relations between the Member States of the European Union and third countries by replacing the principle of nationality by the principle of the right of establishment.

The restrictions on market access arising from the Chicago Convention and the bilateral framework system are being replaced by a gradual liberalization extended to various regions of the world.

The new bilateral and/or multilateral air services agreements reflect the will of States to promote an international aviation system based on fair competition with a minimum government interference and regulation. This new

framework aims to facilitate the expansion of opportunities for international air carriers, in particular through the development of air transport networks that meet the needs of passengers and shippers. The wide range of services and competitive prices offered to passengers and shippers does not prevent that the aeronautical authorities continue to secure the highest standards of “safety” and “security”.

Portugal being a member state of the European Union since 1986 has benefited from the new approach introduced by the EU regulation. In this regard, new operators, new routes, and the reduction on tariffs were an important booster to the traffic growth (107% from 2003 to 2014, on the 5 main Portuguese airports, 3 in mainland and 2 in the 2 North Atlantic regions of Madeira and Azores). See Figure 1.

### Improve Air Transport Connectivity – Promote Leisure, Cultural, Sporting and Business Tourism and Economic Development

The new regulation has created an adequate framework for air carriers to develop their specific strategies on a set of different geographical markets through the exercise of the 3<sup>rd</sup> and 4<sup>th</sup> freedom rights and also of the 5<sup>th</sup> and 7<sup>th</sup> freedom traffic rights, as well as cabotage within the European single market.

These kind of strategies have been widespread in other regions including Eastern Europe and the Mediterranean (i.e. Morocco), as well as other countries worldwide through the new agreements

concluded by the European Commission and the EU Member States namely under the Horizontal (i.e. Chile) and the Vertical Mandates (i.e. USA).

In this context, the emerging air carriers, such as the LCC's have contributed to traffic growth, to improve international air transport connectivity and the promotion of tourism and economic development. In Portugal, the LCC's operating at the national airports have increased from 12 operators in 2010 to 15 operators in 2015, and the share of tourism revenues represented 41.6%<sup>2</sup> in exports of services in 2012.

At domestic level, air transport connectivity is of the utmost importance for the economic, social and territorial cohesion of the Portuguese territory and its population, as Portugal is the westernmost country of mainland Europe, being bordered by the Atlantic Ocean to the west and south, and holding sovereignty over the Atlantic archipelagos of Azores and Madeira. In these markets the two major European LCC's have already started operating scheduled air services offering a diversity of products at lower prices.

### Growth of Tourism – Airports, Travel Agents, Hotels, Restaurants, Shopping and Others

Tourism has become one of the major players in international commerce and one of the fastest growing economic sectors in the world<sup>3</sup>.

The mild climate influenced by the mountains, its latitude and the proximity to the sea, which offers mild winters, the beaches at the Atlantic Ocean, the great diversity of landscapes and a unique cultural heritage, makes Portugal a tourist destination throughout the year. The offer of quality tourist services includes an excellent gastronomy, fine wines and the sympathy of the Portuguese people.

In Portugal, tourism represents a substantial share of GDP and contributes to the creation of direct and indirect jobs as well as to the stability of the balance of payments and to the regional development. According to UNWTO (2015) Portugal is ranked in the 26<sup>th</sup> position for revenues from tourism. The total and direct contribution of tourism to Portuguese GDP is higher than the EU GDP and shows a growing trend as a result of the promotion of Portugal as a tourist destination for leisure and business. *See Figure 2.*

### Creation of Jobs – Civil Aviation Sector (Direct) and Related Sectors (Indirect)

The liberalization of market access is even creating new opportunities for the air transport sector, either through the access to new markets or the emergence of new airlines, increasing competitiveness among the airlines that have to offer to passengers a variety of products and better services at competitive prices.

In such a competitive market, the sector's stakeholders, in general, and airlines, in particular, have to rationalize their operational performances and be more cost efficient, without jeopardizing the higher standard on safety and security. In this regard, traffic growth does not correspond in the same proportion to the creation of jobs. In Portugal, between 2008 and 2014, despite the fact that traffic has grown 50% at the 5 main airports, jobs in the civil aviation sector have increased only 2.8%.

### Conclusion

In conclusion, the liberalization of market access contributes to improved air transport connectivity, to develop the tourist sector<sup>4</sup> and national economies.

<sup>1</sup> ICAO

<sup>2</sup> Tourism of Portugal Report 2012

<sup>3</sup> UNWTO

<sup>4</sup> Source: ANAC - ANSPs, airports, air transport, executive aviation, maintenance, airworthiness and production, handling, training organizations

### Number of scheduled passengers (O/D + transfers)

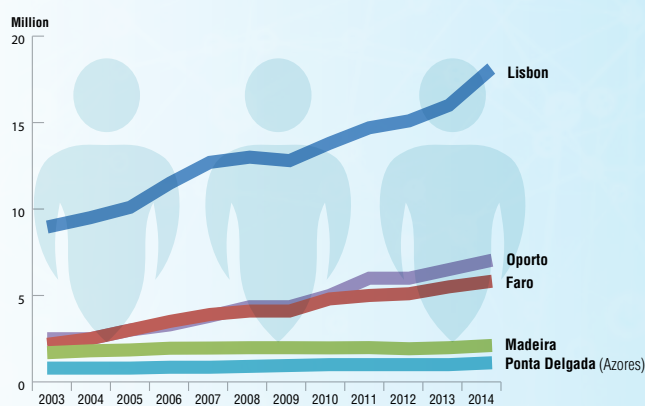


Figure 1 Source: ANAC

### Total contribution of the tourist sector to national GDP

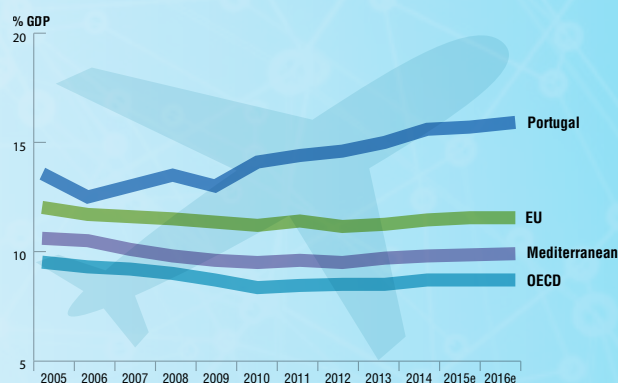


Figure 2 Source: World Travel & Tourism Council



Tackling a  
complex issue  
with a few  
simple next  
steps



# Aviation Cyber Security

The

# Swiss

Approach

Aviation safety and security experts are used to a rather physical approach. Adding a cyber perspective provides a new challenge: the virtual aspect. Protection now extends beyond physical assets to systems and data. Seemingly invisible attacks could be launched from anywhere, at any time, potentially affecting multiple assets simultaneously. The challenge seems daunting at first sight.

First experiences in implementing aviation cyber security in Switzerland have shown that the outlook is far from bleak – the aviation sector features many characteristics that distinguish it from other sectors and will allow it to progress rapidly to address cyber threats. A strong and effective reporting culture can easily be translated to the topic of cyberattacks. Risk assessment procedures are well established and now simply need to be adapted to this emerging threat. And while the attackers are versatile and innovative, the aviation sector is truly international and is built upon a strong foundation of no “single points of failure”. All of these elements are an excellent basis to tackle this complex question with simple next steps.

Thanks to its close cooperation with the European Civil Aviation Conference (ECAC), Switzerland has gained valuable first hand experience in addressing aviation cyber security. During this process, the industry was always closely involved, which has led to fruitful debates and pragmatic approaches.

Based on this experience, the following next steps should be established together with other States as well as with ECAC, the EU (incl. EASA), Eurocontrol and ICAO.

### Coordinated Reporting of Cyber Incidents

The aviation sector has one of the strongest reporting and safety/security cultures in the world. This strong reporting culture is an excellent basis for the creation of appropriate cyber incident reporting mechanisms. Reporting cyber incidents of a significant nature to aviation-specific Computer Emergency Response Teams (CERTs) or Information Sharing and Analysis Centers (ISACs) will allow the sector to be aware of emerging threats and respond appropriately. A voluntary reporting mechanism for the aviation sector has been implemented in Switzerland. Coordinated cyber incident reporting provides an early-warning tool and should be encouraged nationally and regionally with international coordination led by ICAO.

### Risk Assessments

Both aviation safety and aviation security are well versed in employing risk assessment tools for decision making. Know-how gained by Switzerland through close cooperation with information security specialists has shown that existing information and IT security best practices also take a

risk assessment approach. At a company level, a well-founded risk assessment provides the basis for the implementation of proportionate and pragmatic cyber security measures. While some measures may be implemented by the company on its own, others will require international coordination due to the interconnected nature of aviation systems and data flows. Such international coordination is best-placed at ICAO level as potential regulatory requirements should be integrated into the existing framework of ICAO Annexes.

### A Functional Thematic Approach

While the aviation sector in general has a solid basis upon which to start, one significant challenge remains: historically, regulations have been created in isolated areas addressing air navigation services, air operations, airworthiness and aerodromes in separation. This fragmented approach is appropriate with respect to physical assets, but it proves challenging in the horizontal world of information technology and data flows.

However, a simple solution is at hand: the aviation sector can be broken down not only into different physical categories, but into existing horizontal functional topics. Themes such as e.g. Navigation, Communication, Surveillance, Aviate, Operations or Maintenance are well-known concepts. Going forward, a horizontal and functional approach to aviation cyber security would allow for a focused discussion per theme. Cyber security solutions along the whole information chain per function must be addressed, ensuring that responsibilities are clarified and suggested security measures remain proportionate. Furthermore, such a functional approach will allow for specific points of intersection with thematic counterparts in other sectors or international organizations.

Although the challenge posed by cyber threats to aviation is complex, by following clearly defined next steps we will achieve robust progress. Solutions such as coordinated cyber incident reporting, adapted risk assessments and employing a functional thematic approach will allow the aviation sector to make significant progress on cyber security during the next triennium. Switzerland and the ABIS-States are strongly supporting ICAO in advancing step-by-step to address aviation cyber security in close cooperation with industry.



1

### Coordinated reporting of cyber incidents

Coordinated cyber incident reporting provides an early-warning tool and should be encouraged nationally and regionally with international coordination led by ICAO.

2

### Risk assessments

A well-founded risk assessment provides the basis for the implementation of proportionate and pragmatic cyber security measures.

3

### A functional thematic approach

A horizontal and functional approach to aviation cyber security would allow for a focused discussion per theme. This approach will allow for specific points of intersection with thematic counterparts in other sectors or international organizations.





# Thank You

## SAY HI!

### KLM's Social Media Strategy

KLM's social media strategy is simple:

“We believe we should be where our customers are.”

Since 2009 KLM gained a reputation as an initiator and pioneer in the area of social media services and campaigns in the social landscape. Based on a strategy founded on 3 pillars, service, brand & reputation and commerce, KLM took a major step on 18 July 2011, becoming one of the world's first companies to offer 24-hour service via social media.

But our ambitions do not end there. We aim to fully optimize our contact with customers via social media during various phases of their trip. This enables us to provide customers with the most relevant information and offers at specific points in time. Furthermore, KLM is constantly exploring new platforms and the possibility of offering service in even more languages.

At the beginning of 2016 KLM has more than 18 million fans and followers on social media. Every week, KLM receives over 100,000 mentions on social media, 9,000 of which are questions or remarks. These are personally replied to within the hour by our 200+ service agents, forming the world's largest dedicated social media team.

On six social media platforms Facebook, Twitter, WeChat, KakaoTalk, VKontakte and LinkedIn KLM offers customers a 24/7 one-stop-shop in 13 different languages: Dutch, English, German, Spanish, Portuguese, Italian, French, Norwegian, Russian, Japanese, Chinese, Korean and Thai.

KLM believes in a new era of social media. “Being frontrunner on social media for over five years, KLM predicts the growing importance of chat apps/one-to-few platforms in the social field”, says Tjalling Smit, Senior Vice President Digital Air France KLM. KLM recently activated the Message button on their Facebook wall, allowing customers contacting KLM even more directly and in a private way. Volumes increased by 40%, which shows customers appreciate this way of communicating.

This example shows us that servicing is shifting. From service by phone and email it moves towards social media, live chat and mobile apps. And it is moving fast!

“With these new ways of offering personalized and direct service to our customers, we are where our customers are,” says Smit.

Portugal has held the ABIS seat on the ICAO Council since the last Assembly in 2013. The ABIS group would like to thank especially Portuguese Director General for Civil Aviation Mr. Luis Ribeiro and Council Representative Mrs Helena Faleiro for their service to ABIS. Mrs Faleiro is a member of several Council Committees - the Air Transport Committee, the Committee on Joint Support of Air Navigation Services, the Technical Co-operation Committee, the Human Resources Committee, the Financial Committee, the Relations with Host Country Committee, as well as the Strategy Planning Group. Mrs Faleiro has been the acting Chairperson of the Finance Committee at the 205<sup>th</sup> Council session and she is the Chairperson of the Human Resources Committee for the 206<sup>th</sup>, 207<sup>th</sup> and 208<sup>th</sup> Council sessions. She has also notably been the Regional Co-ordinator for Europe, playing an important role as interlocutor with ICAO's other regional co-ordinators. In April 2016, she chaired the ICAO Global Level Aviation Dialogue held in the Netherlands. Mrs Faleiro is one of the 70 Women Inspiring Generations of Aviation Professionals.

The ABIS Group would also like to thank Declan Fitzpatrick of the Irish Aviation Authority. Nominated by the ABIS States to ICAO's Air Navigation Commission, during his mandate on the Air Navigation Commission Declan Fitzpatrick served as the Chair of the Strategic Review and Planning group, as Chair of the Commission's group on Safety Management and numerous other ad-hoc working groups. These included participation on groups to address issues on the ICAO Work Programme, the effective development of SARPS and the efficiency of internal procedures and the modernisation of the ANC panels. Declan also served as a member of the ad-hoc working group on aircraft tracking which produced the Global Aeronautical Distress and Safety System (GADSS) concept of operations.







# ABIS Team at ICAO



**Helena Faleiro**

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Candidate for ICAO Council 2016-2019



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