LUIS FELIPE DE OLIVEIRA

Interview with ALTA's Executive Director & CEO

HERMES
AIR TRANSPORT ORGANISATION
THE MAGAZINE

08 | OCTOBER-DECEMBER 2019

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EDITORIAL

Dr Kostas Iatrou
Director General
Hermes - Air Transport Organisation

Happy New Year,

2019 has been a successful year for Hermes.

During 2019 Hermes signed a series of MoUs, namely with ALTA, AFRAA, EUROCONTROL and IATA.

In 2019 Hermes participated for the first time in the 40th ICAO Assembly with the status of observer.

We have welcomed new members in our organisation including Alexandre de Juniac, Eamonn Brennan, Florian Guillermet and Jose Ricardo Botelho.

In the last trimester Hermes participated in key aviation events around the world such as the AACO AGM, ALTA Leaders Forum and the 9th SESAR Innovation Days.

2020 Hermes recommendations and the Hermes Leaders Forum will focus on Digitalisation and AI in Aviation and the Human Factor.

Finally, we have the pleasure to host the interview of Luis Felipe de Oliveira, Executive Director of ALTA and Hermes Board Member.
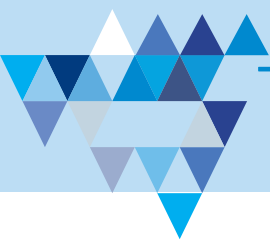
1/10/2019

ICAO ASSEMBLY ELECTS NEW COUNCIL FOR THREE YEAR TERM (2019-2022)

The 40th Session of the Assembly of the International Civil Aviation Organization completed the election of its new Council today. The 36-member Council is the governing body of the Organization and is elected for a three-year term.

The electixon process was divided into three parts, with the following States elected:

PART I - States of chief importance in air transport Australia*, Brazil*, Canada*, China*, France*, Germany*, Italy*, Japan*, Russian Federation*, United Kingdom*, and the United States*.

PART II - States which make the largest contribution to the provision of facilities for international civil air navigation Argentina*, Colombia*, Egypt*, Finland, India*, Mexico*, Netherlands, Nigeria*, Saudi Arabia*, Singapore*, South Africa*, and Spain*.

PART III - States ensuring geographic representation Costa Rica, Côte d'Ivoire, Dominican Republic, Equatorial Guinea, Greece, Malaysia*, Paraguay, Peru, Republic of Korea*, Sudan, Tunisia, United Arab Emirates*, Zambia.

*Indicates re-election.

4/10/2019

AIRLINES WELCOME SIGNIFICANT PROGRESS MADE AT 40TH ICAO ASSEMBLY

The International Air Transport Association (IATA) commended the significant progress made by governments at the 40th Assembly of the International Civil Aviation Organization (ICAO). Environment was at the top of the agenda, and after some robust discussions between states, there were two critical outcomes:

The ICAO Council will report to the next Assembly on options for the adoption of a long-term aspirational goal for reducing carbon emissions from international aviation.The Assembly passed a resolution that reaffirmed and strengthened its support for the successful implementation of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)—the world's first global carbon offsetting scheme.

7/10/2019

KLM MARKS CENTENARY

KLM Royal Dutch Airlines, the world's oldest international airline still operating under its original name, marked its 100th anniversary today. This auspicious occasion was celebrated with a spectacular event, attended by the Minister of Finance, Wopke Hoesktra. He, along with customers, partners, Air France-KLM executives, and staff from various divisions, looked back on 100 years of KLM history and forward to a sustainable future.

Source: KLM

10/10/2019

AIRBUS MARKS ITS 1,000TH A320NEO FAMILY AIRCRAFT DELIVERY

Airbus has delivered the 1,000th A320neo Family aircraft. The aircraft, an A321neo produced in Hamburg, Germany, was delivered to Indian airline IndiGo.

Source: Airbus

10/10/2019

IAG BACKS NET ZERO EMISSIONS BY 2050

International Airlines Group (IAG) is the first airline group worldwide to commit to achieving net zero carbon emissions by 2050.

By doing so, it will contribute to both the UK government's commitment to a net zero carbon economy by 2050 and the United Nations' objective to limit global warming to 1.5 degrees.

10/10/2019

ACI WORLD JOINS WITH GLOBAL PARTNERS TO CALL FOR NEW GUIDANCE ON DRONE OPERATIONS

Airports Council International (ACI) World and its global aviation industry partners have addressed the pressing need for standards and guidance to address unauthorised drone operations to the 40th International Civil Aviation Organization (ICAO) Assembly.

ACI World, the Civil Air Navigation Services Organisation (CANSO), International Federation of Air Traffic Controllers' Associations (IFATCA), International

Federation of Air Line Pilots' Associations (IFALPA) and International Air Transport Association (IATA) presented a paper – entitled The need for standards and guidance to mitigate the risks of, and to improve response to unauthorized UAS operations – which stated that disruption to airport operations by drones is a matter that requires urgent attention by ICAO, States and industry.

16/10/2019

MORE CONTROL, LESS WAITING - TOP PRIORITIES FOR PASSENGERS

The International Air Transport Association (IATA) announced the results of its 2019 Global Passenger Survey showing that passengers are looking to technology to improve their travel experience. The survey acts as the voice of the passenger, providing objective and in-depth insights into the preferences and behaviors of air travelers around the world, helping to guide industry initiatives. The focus of the survey was on processes and technology in the travel experience, not airline or airport service levels. Top passenger priorities identified include:

Having more personal control over their journey via their smart phone

Being able to use biometric identification to speed up travel processes

To be able to track their baggage

Maximum wait times of 10 minutes for baggage collection and immigration/customs

Access to Wi-Fi on board at 34,000ft

16/10/2019

50 AIRPORTS NOW CARBON NEUTRAL IN EUROPE

Ahead of the COP25, European airport trade body ACI EUROPE today gives an update on the progress airports have made to deliver on their commitment to reach 100 carbon neutral airports by 2030. This commitment is a major interim step towards their Net Zero by 2050 vision & pledge - which is part of the wider Sustainability Strategy for Airports launched last June by ACI EUROPE.

20/10/2019

BOEING STATEMENT RELATING TO RECENTLY RELEASED NOV. 15, 2016 INSTANT MESSAGE

We understand and regret the concern caused by the release Friday of a Nov. 15, 2016 instant message involving a former Boeing employee, Mark Forkner, a technical pilot involved in the development of training and manuals. And we especially regret the difficulties that the release of this document has presented for the U.S. Federal Aviation Administration and other regulators.

20/10/2019

RECORD-BREAKING DIRECT NEW YORK TO SYDNEY FLIGHT TOUCHES DOWN

The first non-stop commercial airline flight from New York to Sydney has landed after 19 hours 16 minutes in the air.

A total of 49 passengers and crew were on the flight, which was used to run a series of experiments to assess health and well-being onboard. Data from these experiments will be used help shape the crew rostering and customer service of Qantas' ultra long haul flights in future – including Project Sunrise

Source: Qantas

21/10/2019

IMPLEMENTING ICAO AND INTERPOL PROVISIONS KEY TO IMMOBILIZING FOREIGN TERRORIST FIGHTERS

UN Security Council Resolutions on foreign terrorist fighters are achievable, but only if States implement ICAO's and INTERPOL's related provisions fully and effectively, declared ICAO Secretary General Dr. Fang Liu at the INTERPOL General Assembly in Santiago last week. Providing the keynote address, Dr. Liu highlighted the crucial importance of States' commitments to one another under the 1944 Convention on International Civil Aviation, and in particular the standards and recommended practices (SARPs) set forth under its Annex 9 – Facilitation and Annex 17 – Security. She stressed the importance of these SARPs to the UN Countering Terrorist Travel Programme (CTTP), which has been launched by the UN Office of Counter-Terrorism, and is being implemented by

ICAO in partnership with INTERPOL and the UN Counter-Terrorism Committee Executive Directorate (UN CTED), the UN Office of Information Communication Technology (OICT), and the UN Office on Drugs and Crime (UNODC).

Source: https://www.atn.aero

22/10/2019

BOEING APPOINTS STAN DEAL CEO OF BOEING COMMERCIAL AIRPLANES AND TED COLBERT CEO OF BOEING GLOBAL SERVICES

The Boeing Company (NYSE: BA) today named Stan Deal to succeed Kevin McAllisteras president and CEO of Boeing Commercial Airplanes and Ted Colbert to succeed Deal as president and CEO of Boeing Global Services, effective immediately. Vishwa Uddanwadiker is appointed to Colbert's former role as interim chief information officer and senior vice president of Information Technology & Data Analytics.

24/10/2019

ACI RESEARCH SHOWS EXPERIENCE IN WAITING AREAS CRUCIAL TO CUSTOMER SATISFACTION

Airports Council International (ACI) World has today published a new research report which shows that the comfort of waiting areas at airport gates is a crucial overall driver of customer satisfaction.

According to ASQ, infrastructure is the most important driver of overall passenger satisfaction and the perception of comfort of waiting at the gate areas is a key component of this.

24/10/2019

SPIRIT AIRLINES SIGNS MOU FOR UP TO 100 A320NEO FAMILY AIRCRAFT

Airbus and Spirit Airlines have agreed to a Memorandum of Understanding for the U.S.-based airline to acquire up to 100 A320neo Family aircraft. Spirit announced its intention to place firm orders for a mix of A319neo, A320neo, and A321neo to meet its future fleet requirements.

Source: Spirit Airlines

25/10/2019

FAA STATEMENT ON LION AIR FLIGHT 610 ACCIDENT REPORT

The FAA's first priority is always safety. The Indonesian National Transportation Safety Committee's accident report on Lion Air Flight 610 is a sober reminder to us of the importance of that mission, and we again express our deepest condolences to the families and loved ones of those who died in that tragic accident. We welcome the recommendations from this report and will carefully consider these and all other recommendations as we continue our review of the proposed changes to the Boeing 737 MAX. The FAA is committed to ensuring that the lessons learned from the losses of Lion Air Flight 610 and Ethiopian Airlines Flight 302 will result in an even greater level of safety globally.

The FAA continues to review Boeing's proposed changes to the 737 MAX. As we have previously promised, the aircraft will return to service only after the FAA determines it is safe.

29/10/2019

BOEING CEO: "WE'VE MADE MISTAKES AND WE GOT SOME THINGS WRONG"

Boeing President and Chief Executive Officer Dennis Muilenburg testified, October 29, before the U.S. Senate Committee on Commerce, Science and Transportation regarding aviation safety and the 737 MAX airplane. "We've made mistakes and we got some things wrong. We're improving and we're learning," he said. "One of the things we've learned ...is we need to provide additional information on MCAS to pilots."

29/10/2019

ACI FINDS AIRPORT INDUSTRY IN A 'HIGH WIRE BALANCING ACT' IN MEETING DEMAND

Airports Council International (ACI) World's annual World Airport Traffic Forecasts (WATF) published today reveal the airport industry is engaged in a high wire balancing act as it prepares to meet surging global demand for air services.

Having reached 8.8 billion in 2018, global traffic is forecast to double by 2037. Over the long term, it is projected to grow at an annualized rate of 3.7%, reaching 19.7 billion by 2040. China is projected to become the largest passenger market in 2031 and then to dominate passenger rankings in 2040, with more than 3.5 billion passengers which equates to an 18% share of the global passenger traffic market. The US and India will follow, with 2.9 and 1.3 billion passengers respectively. Together, the three countries will handle almost 40% of global passenger traffic. Indonesia, currently the tenth largest market in terms of total passenger traffic worldwide, is expected to rapidly climb in the country rankings, reaching the fourth position by 2036.

29/10/2019

INDIGO SIGNS FOR 300 A320NEO FAMILY AIRCRAFT

India's IndiGo has placed a firm order for 300 A320neo Family aircraft. This marks one of Airbus' largest aircraft orders ever with a single airline operator.

This latest IndiGo order comprises a mix of A320neo, A321neo and A321XLR aircraft. This will take IndiGo's total number of A320neo Family aircraft orders to 730.

Source: Airbus

4/11/2019

IAG TO ACQUIRE AIR EUROPA THROUGH IBERIA

International Airlines Group (IAG) today announced an agreement with Globalia to purchase 100% of the equity of Air Europa, through its IBERIA subsidiary, for about 1,000 million euros, to be paid in cash on closing the deal. This agreement will bring Air Europa into a solid group of airlines which have grown in size and profitability within the IAG holding company. Air Europa, which will continue to operate under its brand name, will now also benefit from the opportunities afforded by membership in the group.

13/11/2019

WE ARE ALL ONE IN THE SKY - AVIATION PARTNERS AGREE JOINT PRINCIPLES FOR SAFE INTEGRATION OF DRONES

Members of Europe's leading aviation associations have today published a joint paper setting out the principles to support the safe integration into European airspace of unmanned aircraft, or 'drones'.

This is one of the most critical issues facing the aviation industry today. Drones will revolutionise many aspects of everyday life, from the way people travel, to agriculture, policing, mapping, deliveries, maintenance, asset management and construction. However, their proliferation also raises questions about how to handle their integration without compromising safety or security or disrupting current airspace operations.The *We are ALL ONE in the Sky* initiative, which brings together representatives from the airline, airport, air navigation service, manufacturing, staff associations and beyond, has set out five key principles that 'U-Space Regulation', currently under development by the European Union Aviation Safety Agency (EASA) and the European Commission, should meet. They cover aspects such as the importance of information exchange between all airspace users, the need to ensure the safe integration of drones in the airspace – as opposed to purely segregating them from other users of the airspace - and the fundamental importance of ensuring that today's exceptionally high safety standards are maintained.

15/11/2019

QANTAS CENTENARY CELEBRATIONS TAKE OFF AS DIRECT LONDON-SYDNEY RESEARCH FLIGHT LANDS

Project Sunrise research flight direct from London to Sydney lands after 19 hours and 19 minutes. Qantas announces Centenary program to celebrate 100 years of the flying kangaroo. Royal Australian Mint unveils commemorative $1 centenary coin.

Qantas exhibition to visit a number of cities across Australia. Qantas has kicked off 12 months of centenary celebrations as it marks a fresh milestone in aviation with a non-stop London to Sydney flight.

Flown by the latest addition to the national carrier's fleet, a brand new Boeing 787 Dreamliner landed in Sydney at 12:28pm, 19 hours and 19 minutes after leaving Heathrow. It follows the non-stop New York to Sydney flight last month as the second of

Source: Qantas

three research flights aim at improving crew and passenger wellbeing on ultra long haul services under consideration. The direct flight reduced total travel time by around two hours compared with current one-stop services from the east coast of Australia. It is only the second time any commercial airline has flown this route non-stop, after Qantas flew a near-empty 747-400 in 1989.

18/11/2019

AIRBUS INSPIRED BY NATURE TO BOOST AIRCRAFT ENVIRONMENTAL PERFORMANCE

Airbus has unveiled fello'fly, its latest demonstrator project inspired by biomimicry*, that is set to boost the environmental performance of commercial aircraft and make a significant impact on emissions reduction for the aviation industry. Airbus' fello'fly project aims to demonstrate the technical, operational and commercial viability of two aircraft flying together for long-haul flights.

Through fello'fly, a follower aircraft will retrieve the energy lost by the wake of a leader aircraft, by flying in the smooth updraft of air it creates. This provides lift to the follower aircraft allowing it to decrease engine thrust and therefore reduce fuel consumption in the range of 5-10% per trip.

Source: Airbus
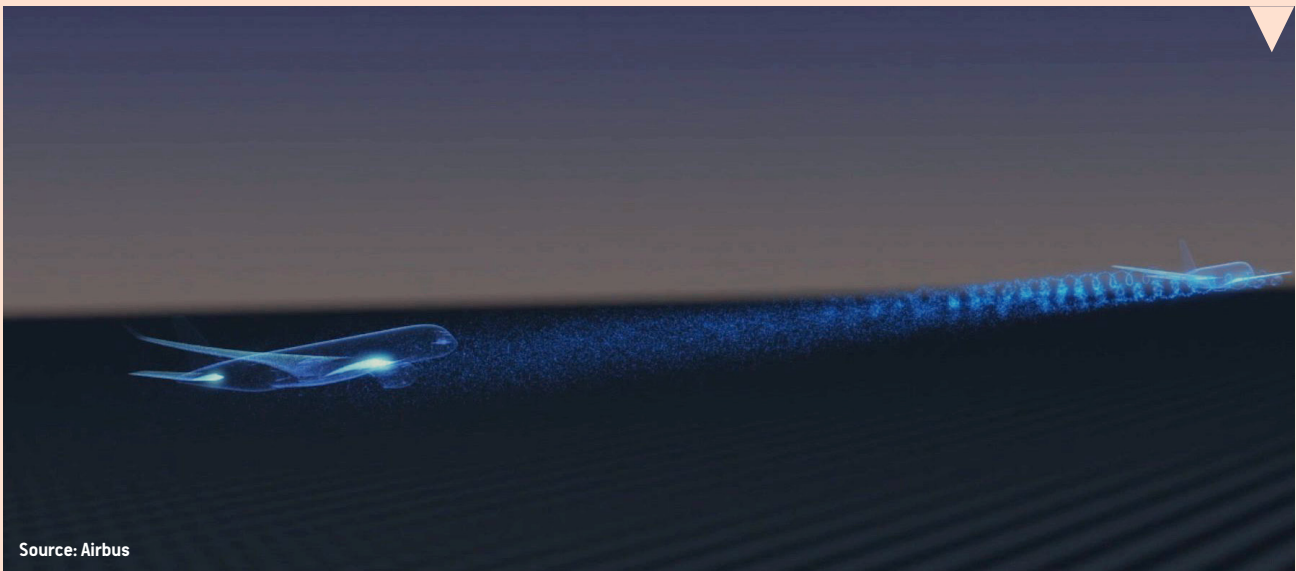
19/11/2019

NTSB ISSUES 7 SAFETY RECOMMENDATIONS BASED ON FINDINGS FROM SOUTHWEST AIRLINES FLIGHT 1380 INVESTIGATION

NTSB issued seven new safety recommendations with five issued to the Federal Aviation Administration, one to the European Aviation Safety Agency, and one to Southwest Airlines. These recommendations address the need to ensure the structural integrity of the fan cowl on Boeing 737 next-generation airplanes and assess whether other airframe and engine combinations have critical fan blade impact locations, the importance of having flight attendants secured in a jumpseat during emergency landings, and guidance for mitigating hazards to passengers affected by an in-flight loss of seating capacity.

19/11/2019

EASYJET TO BECOME THE WORLD'S FIRST MAJOR AIRLINE TO OPERATE NET-ZERO CARBON FLIGHTS

easyJet, Europe's leading airline, has today announced that it will become the world's first major airline to operate net-zero carbon flights across its whole network. The airline will achieve this goal by offsetting the carbon emissions from the fuel used for all of its flights, starting today.

20/11/2019

SUSTAINABLE AVIATION TAKES SIGNIFICANT STEP FORWARD AT ICAO

A new 24/7 service has been launched to provide real-time and worldwide space weather updates for commercial and general aviation. The new service will generate and share space weather advisories using the existing aeronautical fixed network for international aviation, using data collected from dedicated global space weather centres established by 14 countries.

22/11/2019

BOEING 737 MAX 10 MAKES ITS DEBUT

Boeing [NYSE: BA] marked a key milestone as thousands of employees gathered for the debut of the first 737 MAX 10 at the company's Renton, Washington factory. During a ceremony, Boeing leaders highlighted the team's accomplishments and recognized their efforts in completing production of the newest member of the 737 MAX family.

Source: Boeing

25/11/2019

MR. SALVATORE SCIACCHITANO OF ITALY ELECTED PRESIDENT OF THE ICAO COUNCIL

The 36-member governing body of the International Civil Aviation Organization (ICAO), the ICAO Council, has elected Mr. Salvatore Sciacchitano of Italy as its President for a three-year term, beginning 1 January 2020.
He succeeds Dr. Olumuyiwa Benard Aliu of Nigeria, who has held the position for two consecutive terms since 2014.

Source: ICAO

25/11/2019

ACI REPORT EXPLORES THE GROWING USE OF AUTONOMOUS VEHICLES AT AIRPORTS

Airports Council International (ACI) World has today launched The Autonomous Vehicles and Systems at Airports Report, to help airports assess key opportunities for the application of autonomous vehicles at airports. The report brings together information from these first attempts at integrating this new technology and uses it to gain a better understanding of the likely impact on aviation in the medium to long term.

26/11/2019

ENTRY INTO FORCE OF THE PROTOCOL TO AMEND THE CONVENTION ON OFFENCES AND CERTAIN OTHER ACTS COMMITTED ON BOARD AIRCRAFT

The Protocol to Amend the Convention on Offences and Certain Other Acts Committed on Board Aircraft, done at Montréal on 4 April 2014, shall enter into force on 1 January 2020. The necessary twenty-second instrument of ratification was deposited with the Secretary General of ICAO, Dr. Fang Liu, by the Government of the Federal Republic of Nigeria on 26 November 2019.

The instrument was ratified by the President of Nigeria, H.E. Muhammadu Buhari, on 22 November 2019, and deposited by Nigeria's Minister of Aviation, H.E. Hadi Sirika.

The Montreal Protocol 2014 amends the Convention on Offences and Certain Other Acts Committed on Board Aircraft, done at Tokyo on 14 September 1963 (Tokyo Convention, 1963).

Source: ICAO

27/11/2019

EUROPEAN PARLIAMENT ELECTS THE VON DER LEYEN COMMISSION

Following the conclusion of the hearings process, Parliament approved the new Commissioners, presented to plenary by Commission President-elect von der Leyen on Wednesday.

27/11/2019

EMIRATES ROLLS OUT 'YEAR OF TOLERANCE' A380, READY FOR HISTORIC FLIGHT

Underscoring its mission to bring the world together, Emirates has rolled out its A380 dressed in the striking 'Year of Tolerance' livery from its Engineering Centre, ready to take-off for the historic one-off EK 2019 flight on 29 November that will bring together the diverse, multi-cultural communities of the UAE.

The vibrant 'Year of Tolerance' livery depicts a panorama of people from diverse backgrounds and cultures holding hands in solidarity, celebrating the UAE's message of multiculturalism. The colourful illustrations adorn both sides of the aircraft. After its debut this Friday, this aircraft will fly across Emirates' A380 network of over 50 destinations for the next twelve months to spread messages of tolerance and mutual respect wherever it lands.

Source: Emirates

3/12/2019

ACI LAUNCHES NEW GUIDANCE ON COMPUTED TOMOGRAPHY TECHNOLOGY SCREENING

Airports Council International (ACI) World has today launched a new implementation guide for Computed Tomography – or CT – screening technology that can help airports improve efficiency and passenger experience at security checkpoints.

The Advanced Cabin Baggage Screening/Computed Tomography (CT) Implementation Guide was developed with ACI's Smart Security Management Group, which is comprised of some of the world's most innovative airports, regulators and airlines. It highlights the key benefits of CT technology for the cabin baggage screening process.

The guide provides a comprehensive summary of best practices and suggested actions, from procurement to installation and operation, that airports should consider taking before and during the implementation of this new technology into their existing operations.

ACI
AIRPORTS COUNCIL
INTERNATIONAL

4/12/2019

IATA LAUNCHES INNOVATION PLATFORM POWERED BY PLUG AND PLAY

The International Air Transport Association (IATA) announced the creation of Accelerate@IATA, an industry level innovation platform designed to support airlines and their value chain partners by speeding up new technology implementation around IATA standards. The program brings together airlines, value chain partners, and startups to pinpoint problems, find solutions and ultimately demonstrate value through pilots and implementations. IATA also announced it selected Plug and Play to help operate the program and identify and connect with Plug and Play's network of more than 15,000 startups.

4/12/2019

UNITED AIRLINES ORDERS 50 AIRBUS A321XLRS FOR TRANSATLANTIC ROUTE EXPANSION

United Airlines has placed a firm order for 50 Airbus A321XLR aircraft as it begins to phase out older models and launches an expansion of transatlantic routes from its key U.S. hubs in Newark/New York and Washington, D.C. United plans to take delivery of the first A321XLR in 2024 and expects to begin international service with the aircraft in 2025.

Source: Airbus

4/12/2019

AIR FRANCE AND THE SOLAR IMPULSE FOUNDATION ARE CALLING FOR CLEAN, EFFICIENT AND PROFITABLE SOLUTIONS TO ACCELERATE THE ECOLOGICAL TRANSITION OF THE AVIATION SECTOR

Air France and the Solar Impulse Foundation are calling for clean, efficient and profitable solutions to accelerate the ecological transition of the aviation sector. The two partners have developed a digital platform to enable project leaders to apply online.

The Solar Impulse Foundation will first examine the solutions on the basis of the criteria of its *Solar Impulse Efficient Solution* Label, assessing their environmental impact, economic profitability and technological feasibility.

Projects that meet the Label's requirements will all be made available to the aviation industry, to help build a more sustainable world. Those that come

within the framework of Air France's trajectory will be developed within the company.

Source: Air France

4/10/2019

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The International Air Transport Association (IATA) announced the creation of Accelerate@IATA, an industry level innovation platform designed to support airlines and their value chain partners by speeding up new technology implementation around IATA standards. The program brings together airlines, value chain partners, and startups to pinpoint problems, find solutions and ultimately demonstrate value through pilots and implementations. IATA also announced it selected Plug and Play to help operate the program and identify and connect with Plug and Play's network of more than 15,000 startups.

5/12/2019

NORWEGIAN OFFERS CUSTOMERS CO2-OFFSETTING AND BECOMES FIRST AIRLINE TO SIGN UN CLIMATE ACTION INITIATIVE

Norwegian has partnered with climate company CHOOOSE to make it easy for customers to offset their carbon footprint when buying a ticket with the airline. The initiative has been welcomed by the United Nations Framework Convention on Climate Change (UNFCCC).

Source: Norwegian

11/12/2019

THE ONEX GROUP COMPLETES ACQUISITION OF WESTJET

Onex Corporation and its affiliated funds and WestJet Airlines Ltd. today announced they have completed their transaction (the "Arrangement") valued at approximately $5 billion including assumed debt. The closing comes following the receipt of the final regulatory approval by the Canadian Transportation Agency of its determination under the *Canada Transportation Act*.

11/12/2019

25BY2025 GAINS MOMENTUM WITH 59 AIRLINES JOINING THE CAMPAIGN

The International Air Transport Association (IATA) announced that 59 airlines have committed to the 25by2025 campaign which seeks to address gender balance in civil aviation.

The 25by2025 campaign was launched on 26 September 2019 with participating airlines making a voluntary commitment to:

- Increase the number of women in senior positions (to be defined by the member airlines) by either 25% against currently reported metrics or to a minimum representation of 25% by 2025
- Increase the number of women in under-represented jobs (e.g., pilots and operations) by either 25% against currently reported metrics or to a minimum representation of 25% by 2025
- Report annually on key diversity metrics

11/12/2019

ADOPTION TODAY BY THE EUROPEAN COMMISSION OF ITS AMBITIOUS SUSTAINABILITY & CLIMATE STRATEGY ('THE EUROPEAN GREEN DEAL')

The Green Deal is an integral part of this Commission's strategy to implement the United Nation's 2030 Agenda and the sustainable development goals, and the other priorities announced in President von der Leyen's political guidelines. As part of the Green Deal, the Commission will refocus the European Semester process of macroeconomic coordination to integrate the United Nations' sustainable development goals, to put sustainability and the well-being of citizens at the centre of economic policy, and the sustainable development goals at the heart of the EU's policymaking and action.
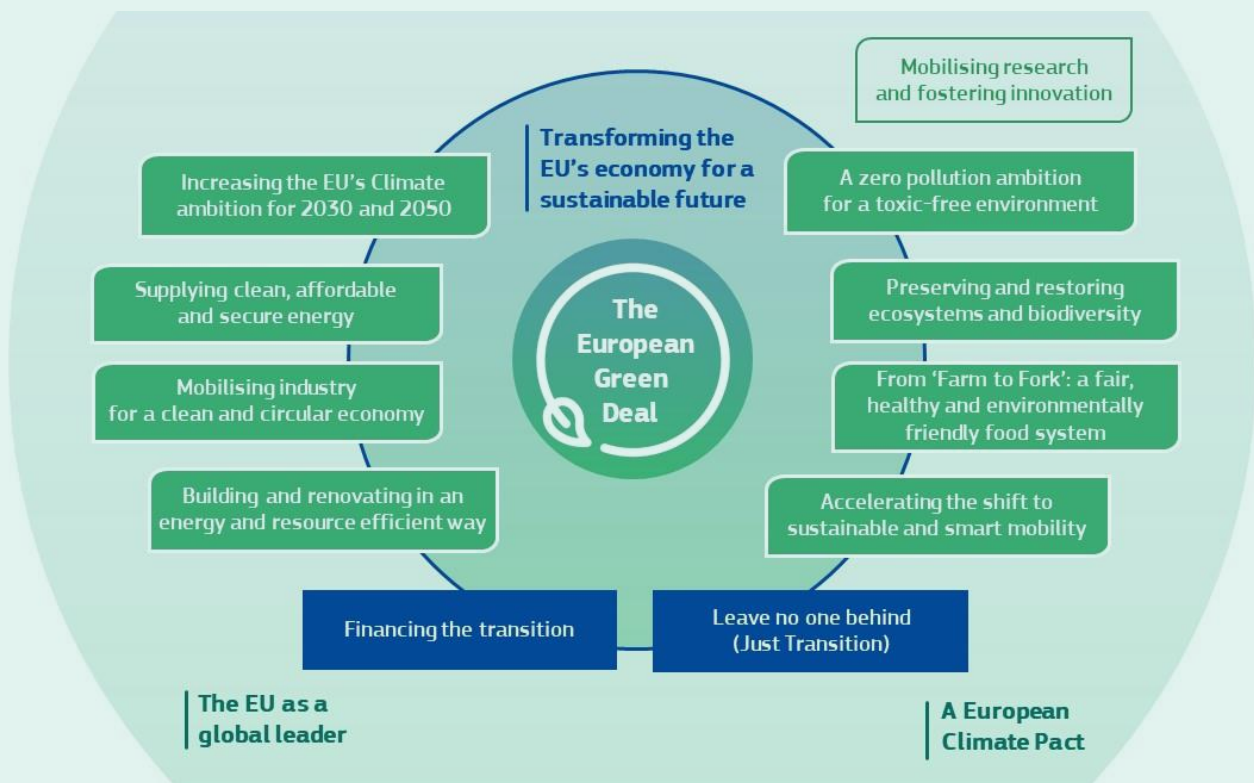
Figure 1: The European Green Deal

Source: European Commission

12/12/2019

FIRST E175-E2 JET COMPLETES ITS MAIDEN FLIGHT

The Embraer E175-E2 made its inaugural flight today from the company's facility in Sao José dos Campos. The E175-E2 is the third member of the E-Jets E2 family. The maiden flight kicks off a rigorous 24-month flight test campaign.

Source: Embraer

12/12/2019

IATA: CARBON EMISSIONS PER PASSENGER DECREASE MORE THAN 50% SINCE 1990

The International Air Transport Association (IATA) published information confirming that carbon emissions per passenger have declined by more than 50% since 1990. Much of the improvement has occurred because the industry has achieved an annual fuel efficiency improvement of 2.3% over the period since 2009, some 0.8 percentage points ahead of target.

This progress is a combination of investments in more efficient aircraft and operational efficiencies.

16/12/2019

BOEING SUSPENDS 737 MAX PRODUCTION STARTING IN JANUARY DUE TO CERTIFICATION MOVING INTO 2020

Throughout the grounding of the 737 MAX, Boeing has continued to build new airplanes and there are now approximately 400 airplanes in storage. Boeing have previously stated that they would continually evaluate our production plans should the MAX grounding continue longer than they expected. As a result of this ongoing evaluation, Boeing has decided to prioritize the delivery of stored aircraft and temporarily suspend production on the 737 program beginning next month.

17/12/2019

PLAN TO DIGITALISE EUROPE'S AVIATION INFRASTRUCTURE ADOPTED

The Administrative Board of the SESAR Joint Undertaking today formally approved the 2020 edition of the European ATM Master Plan, signalling strong consensus across Europe's aviation sector to move ahead swiftly with the digital transformation of Europe's aviation infrastructure, making air transport smarter, more sustainable and accessible to all.

This move towards a "digital European sky" by 2040 relies on bringing forward technologies that can increase the levels of automation, cyber-secure data sharing and connectivity in ATM. This will allow for smarter air traffic service provision, catering for conventional aircraft and new entrants in all types of airspace including very-low and high altitude operations.

In doing so, these technologies enable the system to become more modular and agile, while building resilience to disruptions, traffic growth and diversity of air vehicles.

EUROPEAN ATM MASTER PLAN | Digitalising Europe's Aviation Infrastructure

Executive view

SESAR JOINT UNDERTAKING

founding members

2020 edition

20/11/2019

SUSTAINABLE AVIATION TAKES SIGNIFICANT STEP FORWARD AT ICAO

A new 24/7 service has been launched to provide real-time and worldwide space weather updates for commercial and general aviation. The new service will generate and share space weather advisories using the existing aeronautical fixed network for international aviation, using data collected from dedicated global space weather centres established by 14 countries.

23/12/2019

BOEING ANNOUNCES LEADERSHIP CHANGES: DAVID L. CALHOUN NAMED PRESIDENT AND CEO

The Company also announced that Dennis A. Muilenburg has resigned from his positions as Chief Executive Officer and Board director effective immediately

HERMES
AIR TRANSPORT ORGANISATION

Jose Ricardo Botelho, Director-President of ANAC Brazil become member of Hermes

During the 2019 ALTA Leaders Forum held in Brasilia Jose Ricardo Botelho, Director-President of Agencia Nacional de Aviaçao Civil of Brazil became member of Hermes.

Jose Ricardo Botelho said: "*It is with great enthusiasm and satisfaction that I accept this kindly offer to be a member of this prestigious institution. I am sure that together we will contribute to foster the development, progress and promotion of air transport at a global level.*"

Dr Kostas Iatrou, Director General of Hermes added: "I am pleased to welcome Jose in Hermes. His experience and knowledge can significantly contribute Hermes targets"

From right: Luis Felipe de Oliveira, Executive Director of ALTA & Hermes Board Member, Jose Ricardo Botelho and Dr Kostas Iatrou

Hermes actively participated in AACO AGM

Hermes — Air transport Organisation was represented in the 52nd AACO AGM held in Kuwait on 4-6 November with three Board Members.

Henrik Hololei, Board member and DG for Mobility & Transport of the European Commission, participated in the CEO Panel while

Luis Felipe Oliveira, Board Member and Executive Director of ALTA, was invited by AACO. Hermes' Director General, Dr Kostas Iatrou, officially represented Hermes in AACO AGM.

Finally, Vijay Poonoosamy, Hermes Honorary member, moderated the CEO Panel.

Hermes Director General participates as the opening keynote speaker in the 9th SESAR Innovation Days

Dr Kostas Iatrou, Director General of Hermes – Air Transport Organisation, participated as the opening keynote speaker in the 9th SESAR Innovation Days held in Athens, GREECE, from 2-5 December 2019.

Florian Guillermet, Executive Director of SESAR become member of Hermes

At the 9th SESAR Innovation Days held in Athens 2-5 December Florian Guillermet, Executive Director of SESAR became member of Hermes.

"I am proud to be part of the Hermes community which assemble major actors of the sector, all dedicated people in the Aviation community!" said Florian Guillermet, Executive Director of SESAR.

Dr Kostas Iatrou, Director General of Hermes added: *"On behalf of Hermes Board I would like to welcome to our organisation, Florian, a distinguished leader that honours Hermes."*

ALTA

ALTA transformed its leadership, moved its headquarters to Panama, strengthened its team and redefined its focus to be a more strategic and effective association at the service of the aviation industry

This 2020 ALTA reaches 40 years of trajectory being stronger, more agile and even more committed to the environment, and to be in line with our work philosophy, we refreshed our corporate identity in order to showcase our legacy and essence with a more open, minimalist and on the move mindset

Welcome to ALTA's new era!

ALTA AIRLINE LEADERS FORUM
Latin American and Caribbean Airlines Annual Meeting

16th ALTA AIRLINE LEADERS FORUM

OCTOBER 29, 2019/BRAZIL

A successful ALTA AIRLINE LEADERS FORUM has concluded on Tuesday (Oct. 29) after two days of discussions aim to integrating government and industry to develop a joint agenda for the benefit of the Latin American and the Caribbean region.

The conference official opening was carried out by the ALTA's Executive Director & CEO, Luis Felipe de Oliveira, the Director President of the National Civil Aviation Agency of Brazil (ANAC), José Ricardo Botelho, and the Minister of Infrastructure of Brazil, Tarcisio Freitas.

De Oliveira welcomed 520 industry executives and government representatives to his home country on Monday morning and recalled that for many years ALTA was away from Brazil. "In the last two years, ALTA has been developing an integration work to build strong relationships with Brazilian entities -private and governmental- and generate campaigns to strengthen local work with the aim of developing more efficient and sustainable aviation. This year we welcomed two Brazilian companies: GOL and Two-Flex and we will certainly continue to approach to jointly work."

José Ricardo Botelho welcomed to "the country of open skies". He remarked that aviation is a means of national integration and that 70% of long-distance trips in Brazil are made by airplane.

Minister Tarcisio Freitas officially opened the event and mentioned the investment program created from 2016 and maintained by the current government, an initiative that "took up the infrastructure theme to the State scope".

He also stressed that Brazil has the largest concession program in history, perhaps the largest in the world, and remarked that "the country will enter an era of sustainable growth that will last the next few years and will directly impact the aviation sector."

Opening the academic agenda, the President of the ALTA Executive Committee & Copa Airlines CEO, Pedro Heilbron, offered an industry landscape, highlighting that 2019 will be the sixteenth consecutive year in of passenger traffic growth in Latin America and the Caribbean, as well as good practices throughout the region in regards of airspace rede-

ALTA AIRLINE LEADERS FORUM
Latin American and Caribbean Airlines Annual Meeting

LUIS FELIPE DE OLIVEIRA
Executive Director & CEO
ALTA

Source: ALTA

sign, open skies agreements and the taxes and fees reduction, to name a few.

GLOBAL EXPERIENCE

Captain Steve Dickson, FAA Administrator highlighted the institution's projects and perspectives on safety and drones and an update on the MAX. Likewise, Michael Linenberg, Managing Director Deutsche Bank Securities Inc., offered an economic analysis of Latin America and the Caribbean and its correlation with air transport.

Aviation is a global industry and the harmonization and regulations related to the sector become extremely important. Carlos Bermejo Acosta, Head of Unit, European Commission presented as a case of success the air market unification in the European Union, with the harmonization of reg-

ulations in environmental, operational, licensing and safety aspects.

In her presentation, Deborah Flint, CEO Los Angeles World Airports (LAWA), share that LAWA's mission is serving the world as its business foundation. Today, LAWA has 56,000 employees acting as the airport ambassadors, an investment in the infrastructure of USD $ 14 million and the leading-edge technology of the United States.

THE COST OF FLYING IN BRAZIL

The characteristics of the Brazilian aviation market, high fuel costs, and taxes were some of the topics addressed in the presentation of Maurıcio França, Partner of the consulting firm L.E.K. Topics subsequently deepened by the President of ABEAR (Brazilian Association of Airlines), Eduardo Sanovicz, and the Executive Secretary of the Ministry of Infrastructure, Marcelo

ALTA AIRLINE LEADERS FORUM
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Source: ALTA

Sampaio, who stressed that "if we want to grow, we need to reduce costs" he also mentioned the need to open the market as much as possible. For the Brazilian government, regional aviation is a priority.

Judicialization and its impact on the development of aviation in Brazil panel brought to discussion the regulations related to air transport services and consumer pro tection, and the impact of the legal actions cost against airlines and furthermore its impact on the development of aviation in Brazil.

The panel gathered lawyer Ricardo Bernardi, founding partner of Bernardi and Schnapp Advogados, and minister Francisco Rezek, former Minister of the Supreme Federal Court of Brazil and former Minister of External Relations of Brazil.

The panel that gathered CEOs of Brazilian airlines and local regulators to address topics related to the competitiveness of the industry in Brazil was mediated by journalist and writer Alexandre Garcia. Paulo Kakinoff, CEO GOL; Jerome Cadier, CEO Latam Airlines Brasil; the Superintendent of Air Services Accompaniment, Ricardo Catanant; and Ronei Glanzmann, Secretary of Civil Aviation, participated in the discussion.

The executives talked about the country's liberal economic agenda, the challenges inherent to Brazilian market, the importance of the favorable conditions for investment and the relationship with the region markets.

LATIN AMERICAN AIRLINES CEOS

A highly volatile regional context, coupled with the challenging nature of the aviation industry with procurement scenarios, inefficient regulations, infrastructure gaps, and a new passenger profile are

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Source: ALTA

among the challenges facing airlines to remain competitive in Latin America.

CEOs of long-trajectory airlines in the region gave an open conversation moderated by the presenter of CNN in Spanish Gabriela Frias.

Anko van der Werff, CEO Avianca, stressed that a country's culture is reflected in companies and that, in almost all countries, this is a key issue for growth. While Enrique Cueto, CEO Latam Airlines, said the alliances fulfill an important mission, especially for passengers. Pedro Heilbron, Copa Airlines CEO, highlighted the investments that are being made in Panama to strengthen connectivity. And Andres Conesa, CEO Aeromexico, pointed out that the country's economy benefits from greater connectivity.

WOMEN IN AVIATION

Tuesday began with a breakfast for women to discuss four questions: why do we have few women in aviation leadership positions?

How the future of aviation and its workforce will be like? Are the working conditions in aviation women-friendly? And is our industry ready to attract young talent?

The discussions provided good ideas that were later reinforced by Julia Sattel, President Airines Amadeus, Diana Einterz, President of SITA Americas, Sylvia Escovar, CEO Terpel, and Donna Hrinak, Vice President of Boeing, President of Boeing Latin America.

Experienced industry leaders who shared strategies to keep their companies competitive and ideas to maintain a diverse and creative talent base.

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Source: ALTA

"COLLABORATION, A SIGN OF THE NEW ERA"

Yolanda Perdomo, ICF Senior Advisor and tourism expert, moderated the panel that evidenced the imperative need for aviation and tourism to work hand in hand and collaboratively. According to WTTC data, tourism will generate 100 million new jobs in the next 10 years and Marcelo Alvaro Antônio, Minister of Tourism Brasil, Gustavo Santos, Secretary of Tourism Argentina, Edgar Vasquez, Minister of Tourism Peru, and Andrea Wolleter, National Director of SERNATUR Chile, agreed to work for hand in hand to develop the connectivity and projects needed to bring the benefits of tourism to all corners of the South American region.

INVESTMENTS: INFRASTRUCTURE AND TECHNOLOGY

IATA Vice President for the Americas, Peter Cerda, led a discussion focused on the development of airport infrastructure, hubs in the region and connectivity with the participation of Daniel Ketchibachian, CEO Aeropuertos Argentina 2000, Alvaro Gonzalez, CEO Opain, Julie Reifer-Jones, CEO LIAT and José Freig, Director American Airlines Latin America.

Federico Chester, Head of Business Development Latin America UBER, presented projects implemented in the region along with airlines and airports to improve the passenger experience, increase loyalty, facilitate operation through efficiencies, generate

ALTA AIRLINE LEADERS FORUM
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Source: ALTA

more business opportunities for industry stake-holders and more.

ISSA PROGRAM

The agenda provided a space to share the achievements of the ISSA Program, a partnership between ALTA and IATA established in June 2018 to facilitate the airlines of the region access to the training required to obtain the ISSA certification (IATA Standard Safety Assessment).The ISSA certificates were delivered to the companies Amaszonas Linea Aérea, Amaszonas Uruguay and TwoFlex, which were recently debuted as ALTA members, and RIMA, which is in the process of being an affiliate.

"The region is very extensive in territory and air transport becomes essential as a safe and efficient means of transport. Initiatives such as the ISSA Program directly help the development of airlines in the region, improving the connectivity, the aviation capillarity to arrive to more places, even remote ones. Today we formally deliver the certification to three airlines that will contribute to connecting more places in our region," said Luis Felipe de Oliveira, ALTA's Executive Director & CEO. IATA is proud to be a part of this important event and I am happy to personally present Amaszonas Bolivia, Amaszonas Uruguay, RIMA and TwoFlex with their respective ISSA certificates. IATA's strategic partnership with ALTA enables us to jointly encourage smaller air-lines in Latin America and the Caribbean to meet a common safety standard, the top priority for our industry", said Gilberto Lopez Meyer, IATA's Senior Vice President Safety & Flight Operations.

During the gala dinner, the Alas de América Award was presented to the President of ANAC, José Ricardo Botelho, in recognition of his leadership at the head of the agency's efforts to build a regulatory environment capable of ensuring greater competitiveness in the market Brazilian air.At the end of the event, Luis Felipe de Oliveira, Executive Director & CEO of ALTA, highlighted the wide exchange of experiences between the participants and the efforts of airlines, industry entities and authorities to meet for three days in what was the Capital of the Aviation of the Americas, Brasilia, to define the actions to be followed to develop the competitiveness of aviation in the region.

"Over the course of three days, the 16th ALTA AIRLINES LEADERS FORUM brought together over 520 participants, including CEO of airlines and airports, senior industry executives, ministers and civil aviation authorities. We had very enriching discussions, innovative proposals and a willingness to work together industry-government so that aviation reaches its great potential as the great economic engine of the region respecting the environment. We are looking forward to seeing you in the next edition of the Forum, in 2020, which will take place in Bogota, Colombia, a country that has shown impressive growth and with prospects of tripling its size in the next 10 years"said de Oliveira.

AACO 52nd AGM

ACO 52nd AGM discussed today strategic issues of relevance to the Arab and global air transport industry, whereby the AGM recalled the role of air transport as a major element in economic development through its role in promoting and facilitating trade and tourism. The AGM highlighted the principles that established the global air transport network which are the Chicago Convention of 1944 and the bilateral air services agreements, focusing on the basic principles of the Chicago Convention that stipulate that states have jurisdiction over their airspace, the air traffic rights given to other states, and all issues related to their own air transport activities. The AGM also discussed the unilateral initiatives being adopted by some states to impose their terms on other states highlighting the negative effect this brings to the sustainable development of international air transport.

Air Transport Relations

Based on these discussions, AACO 52nd AGM adopted a resolution that encourages states to avoid protectionist policies in air transport; and to avoid adopting unilateral and extraterritorial measures that may affect the orderly, sustainable, and harmonious development of international air transport; the AGM also called on states to continue with flexible market access policies due to the benefits those policies bring to the consumer and the sustainable development as well as to the efficiency of airlines' operations; and to resort to dialogue and consultations as the best approach to agree on any issue related to air transport services;

Proliferation of Passenger Rights Regulations

AACO AGM highlighted that airlines are suffering from the proliferation of passenger rights regulations that in most cases contradict with international agreements that regulate the liabilities of airlines, are extraterritorial, do not reflect the fact that inconveniences to passengers are not always caused by airlines, and impose compensation levels and stringent requirements that are making it difficult for airlines to continue to meet the demand on air connectivity; accordingly the AGM encouraged states to formulate passenger rights regulations based on

AACO 52nd AGM

Source: AACO

the following principles: Conducting consultations with all relevant stakeholders before adopting regulations, compatibility between regulations, respect of jurisdictions, joint liabilities, consistency with international treaties, service differentiation, looking into the reasons behind the inconveniences especially checking whether the reasons do not fall within the control of the airline or are related to the safety priority, proportionality between the damage and the relevant compensation, and clarity.

Unruly Behavior onboard Aircraft

AACO AGM also discussed that unruly behavior on-board aircraft could cause harm and inconvenience to passengers and airlines alike, and could affect the safety of the concerned flights, and accordingly the AGM encouraged states to accede to Montreal Protocol 2014 as an enhanced legal deterrent to unruly behavior on-board aircraft.

Reducing the environmental Impact of Aviation

AACO 52nd AGM reaffirmed the commitment

of AACO member airlines to work vigorously with all stakeholders to mitigate the industry's environmental footprint, and called upon all stakeholders to consider CORSIA as THE market-based measure for international aviation without imposing inappropriate economic burden on international aviation and to take into consideration ICAO 40th Assembly's resolutions, particularly on studying the long-term economic impact of the 2050 goal.

The AGM also highlighted that the development of infrastructure is crucial to delivering a better environment, safer air transport, and better service to the travelers. This development should expand, streamline, and defragment the airspace infrastructure to allow optimal flight paths, and should expand ground facilities.

The AGM as well called upon all stakeholders to commit any financial returns resulting from environmental measures into developing low net emission fuel and make it commercially available for the aviation industry.

The AGM also called upon technology partners to invest in game-changing technologies that would maintain the economic accessibility of air travel while reducing its environmental impact.

Finally the AGM resolved to focus on developing human resources to deal with issues related to

AACO 52nd AGM

aviation and the environment in the future, and to develop guidelines for future generations working in the air transport industry on how to address aviation's impact on the environment.

Arab-EU Aviation Summit 2020

The AGM was informed that an Arab – EU aviation Summit will be held in Beirut on 23-24 March 2020 jointly organized by the Arab Civil Aviation Organization and the European Commission – DG MOVE, with the kind hosting of Middle East Airlines and the support of the Arab Air Carriers Organization.

AACO Secretary General's Report

In his report to the AGM, AACO Secretary General, Abdul Wahab Teffaha, described the state of the global and Arab economy which both registered a slowdown in economic growth where reasons of that slowdown differ from one region to the other. The Secretary General also presented Arab air transport statistics and the development of this sector through the decades in relation to regional and global factors that had an effect on the development of the sector.

The Secretary General focused in his report on the role of the Arab airlines as major players in global transport by attracting inter-continental traffic through their hubs, where Arab airlines are now present on the global aviation map through their competitiveness which is fueled by the quality of their product, the modernity of their fleet, the competitiveness of their fares, the continuous development of their airport infrastructure, and, most importantly, by treating their passengers as guests so that they ensure they enjoy their travel experience. The Secretary General highlighted that Arab airlines are effectively managing capacity on the individual level to meet the fluctuations in demand. As a result, in recent years a slowdown was witnessed in the number of new aircraft introduced into the fleets of Arab airlines which resulted in the world's youngest, most efficient, and, most importantly, lowest emission producing fleet.

AACO Secretary General also talked about the factors that give an optimistic outlook for the Arab air transport as follows:

1. The confidence of the passenger that Arab airlines' level of service is among the best, if not the best, in the world.

2. An airport infrastructure that is being constantly developed to anticipate the needs of future growth.

3. The region's central geographic location.

4. The region's cultural, historical, religious, and civilizational heritage, and its natural diversity that position the Arab region as an important touristic attraction.

5. The young population.

6. Information technology that enabled today's and tomorrow's passengers to transcend geographical boundaries between countries.

AACO Secretary General asked governments for supporting the crucial role of air transport in sustainable development and in job creation in sectors that depend on aviation, in particular to:

1. Continue adopting flexible policies with regards to traffic rights and market access.

2. Expand airspace capacity through flexible use of airspace between civil and military purposes, and through cooperation with other regions to smoothly manage air traffic flows.

3. Take into account, when considering taxes and fees on civil aviation, the negative impact of these taxes and fees on touristic attractiveness versus their direct impact on governmental revenues.

4. Consult with the concerned in the air transport sector with regards to regulating the relationship between airlines and their customers.

AACO 52nd AGM

Source: AACO

The Secretary General went on to talk about the issues that airlines have to deal with and on top of those issues is addressing climate change and improving their environmental impact. AACO Secretary General reminded the AGM that the approach for addressing the environmental impact of civil aviation cannot seriously happen except through the cooperation of all concerned industry stakeholders. He reminded the AGM of the four pillars that the air transport industry adopted and which were adopted as well by the International Civil Aviation Organization and these pillars are: the development of **technology**, to enhance the airport and airspace **infrastructures**, the use of sustainable fuel with reduced net environmental impact, and market-based measures. He highlighted the worldwide wave of taxes and fees as well under the banner of the environment wondering about how those taxes would benefit the environment since none of the revenues coming from these taxes are re-invested in improving the environment.

The Secretary General highlighted also the priorities of AACO's work; being joint work, representing the interests of AACO member airlines, raising awareness and knowledge through a number of publications, statistical analyses and various forums, in addition to focusing on development of human resources through AACO's regional training center. In particular, the Secretary General mentioned in the area of representing the interests of AACO member airlines the EU regulation no. 712/2019 that substituted EU regulation 868/2004 on fair competition. He referred to the Arab efforts that resulted in reducing some of the ideas that existed in the initial draft of the regulation, and focused on the importance of the way the European institutions would implement the regulation highlighting that in implementing the regulation, they should respect the sovereignty and right of other states to adopt economic, financial and social policies that they deem appropriate for their countries, and that this, or any other regulation, should not be used to impose a certain course of aviation relations between states.

Within the framework of the relation between the EU and Arab regions, the Secretary General mentioned that the Arab Civil Aviation Organization and the European Commission, with the support of Middle East Airlines and AACO, are organizing an Arab-European Aviation Summit that will be held in Beirut on 23-24 March 2020.

The Secretary General also highlighted the Montreal Protocol 2014, which amended Tokyo Convention 1963 regarding dealing with unruly passengers, and which still needs to be ratified by

AACO 52nd AGM

one more state to enter into force. The Secretary General called on member airlines to advocate to their governments the ratification of this Protocol since, even if the Protocol enters into force, it will be only applied on operations between states that have ratified it.Before concluding his report, the Secretary General announced the launch of the weblink www.a4g.org which redirects to AACO current website which remains **www.aaco.org**, whereby A4G means "Airlines for the Globe".

The Secretary General concluded his report, expressing gratitude to the support of AACO member airlines, partner airlines, and industry partners, and partner associations such as ACAO, IATA and others. He also thanked the AGM chairman and his team for their outstanding efforts to make this AGM a success; as well as the Chairman and members of the Executive Committee, affirming AACO's permanent credo: We are proud to serve you...

Election of Chairman and members of AACO Executive Committee

AACO 52nd AGM elected Mr. Mohamad A. Al-Hout, Chairman/Director General of Middle East Airlines, as Chairman of the Executive Committee of AACO which is the second highest authority of AACO. The Executive Committee which members were also elected today by the AGM, comprises of nine members which are, in addition to Mr. Al-Hout, as follows:

- Mr. Abdelhamid Addou/Chairman & Chief Executive Officer – Royal Air Maroc
- Mr. Tony Douglas/Group Chief Executive Officer – Etihad Aviation Group
- Eng. Kamil Al-Awadhi, Chief Executive Officer, Kuwait Airways
- Capt. Ahmed Adel/Chairman & CEO – EGYPTAIR
- H.E. Mr. Akbar Al Baker/ Group Chief Executive – Qatar Airways
- Mr. Stefan Pichler/President & CEO – Royal Jordanian
- H.E. Mr. Sami Sindi, Director General, Saudia
- Mr. Ilyes Mnakbi/Chairman & President – Tunisai

AACO's Annual Report and Annual Air Transport Statistics

The Annual Report and the Annual Arab Air Transport Statistics bulletins were distributed at AACO's AGM, and we highlight below some of the data included:

- The Arab air transport market grew by 5.6% in 2018 compared to 2017, reaching around 313 million passengers.
- Passenger numbers using Arab airports in 2018 increased by 5.3% to reach 378.5 million passengers.
- Cargo handled at Arab airports increased by 2% in 2018 reaching 9 million tons of cargo.
- AACO members served 459 destinations in 128 countries with 4,092 average daily flights, offering 902,987 daily seats on 1,406 aircraft in 2018.
- AACO members' operating revenues increased by 4.8% in 2018 reaching USD 69.6 billion.
- AACO members carried around 229.6 million passengers in 2018 (an increase of 2.8% compared to 2017) and 6.94 million tons of cargo.

Other Highlights of AACO 52nd AGM

Speech by the Director General of the Arab Civil Aviation Organization

In his speech, Eng. Abdennabi Manar, Director General of the Arab Civil Aviation Organization (ACAO), focused on the industry issues that ensure a positive outlook for the future development of the industry reaffirming ACAO's commitment to cooperate with the Arab Air Carriers' Organization to jointly reach the common goals of enhancing the role of civil aviation in economic development.

Closing of the AGM

As the AGM concluded, AACO members thanked the 52nd AGM Chairman, Mr. Yousef A. ALJassem Al-Saqer/ Chairman of Kuwait Airways, for leading this event and for the generous hospitality of Kuwait Airways.

AFRAA's 51st Assembly
10 - 12 NOV 2019

The African Airlines Association (AFRAA) in partnership with Air Mauritius hosted the AFRAA's 51st Annual General Assembly with a call to support African airlines achieve sustainable operations for improved air connectivity in Africa. This year's Assembly was officially opened by the President of the Republic of Mauritius and has brought together more than 400 delegates from across 60 countries.

It was noted that the theme of the summit "Success in an integrated and interconnected Africa" will help uncover challenges, opportunities, lessons and recommendations that will help galvanize efforts towards making the aviation sector in Africa more resilient and competitive.

Speaking as Chief Guest at the Opening Ceremony, H.E Paramasivum Pillay Vyapoory, Acting President of the Republic of Mauritius said: "I am delighted that the AFRAA AGA is being held

in Mauritius following a successful Stakeholder Convention last May. Our island state is a vivid example of the impact Air Connectivity can have on a country's economy. Africa is a continent of opportunities. Only a collaborative effort from all of us can help unlock the potential of aviation and stimulate further economic growth on our continent. I wish all delegates a fruitful summit."

The Assembly, which brought together leading airline CEO's and air transport decision makers and stakeholders, extensively examined ways to achieve success in an integrated and interconnected Africa to establish an environment where aviation can thrive and prosper.

Mr. Abdérahmane Berthé, AFRAA Secretary General said: "Stakeholders have underscored that the Single African Air Transport Market (SAATM) and the African Continental Free Trade Area (AfCFTA) are major opportunities for our region,

AFRAA's 51st Assembly
10 - 12 NOV 2019

Source: AFRAA

Mr. Abdérahmane Berthé, AFRAA Secretary Genera giving his opening speech at AFRAA's 51st AGA.

but we need profitable and globally competitive airlines in order to reap the dividends. We are certain that the insights and partnerships from our 2019 AGA will contribute to the momentum towards a stronger aviation industry in Africa."

In his report, Mr, Berthé noted that in 2018 AFRAA member airlines expanded their networks on both intra-Africa and intercontinental routes. Six AFRAA member airlines launched a total of 23 new routes connecting 14 intercontinental destinations and 9 cities within the continent.

The Assembly also noted that the potential for air traffic growth in Africa is significant and the removal of restrictions and non-physical barriers for the movement of people, goods, and trade as well as the reduction of taxes and charges are vital steps to reduce the cost of travel in Africa and promote the emergence of low-cost carriers.

Mr. Somas Appavou, CEO of Air Mauritius said: "Air connectivity has greatly contributed to the development of our country which makes Mauritius an excellent example of the impact that aviation can have on a country's economy. In Mauritius, air connectivity contributes 22.6% to the GDP representing USD 3 billion in terms of economic activity. We are positioning ourselves to further develop the sector. This can only be envisaged within the broader regional and African context. As African airlines, we all have similar preoccupations and AFRAA's 51st AGA has created a conducive environment for us to ponder on how best to harness the full potential of Africa's aviation."

Among the resolutions, this year's Assembly resolved to set up an Instructor Development Program for AFRAA Member Airlines (IDPA) aimed at developing 100 highly qualified instructors in the next five years (20 per year) with sponsored tuitions to support Human Capital development which is now critical given the fast-growing demand of air transport services in Africa.

The Assembly approved the amended Articles and By-laws of the Association which are aligned with AFRAA's new mission, vision and strategic objectives to promote better efficiency and effectiveness. The Assembly also launched the AFRAA Aviation Consultancy Unit with the objective of providing support to establish efficient and effective strategies to gain leverage in the market and data-driven studies that are aimed to build winning strategies and business plans to achieve the airlines' goals,

Five new member airlines were welcomed at the Assembly namely: Air Djibouti, Air Peace, Air Senegal, Safarilink aviation and Uganda National Airlines Company Ltd. Similarly, six aviation-related companies also joined AFRAA Partnership Programme in 2019, namely: Alton Aviation Consultancy, Associated Energy Group (AEG FUELS), Civic Petroleum Limited, Collins Aerospace, Hitit Computer Services and Safran.

Appointment of AFRAA officials:

The 51st AFRAA AGA elected Mr. Rui Carreira President of the Association for the year 2020. Ms. Yvonne Makolo Chief Executive of RwandAir was elected Chairperson of the Executive Committee. Mr. Desire Bantu Balazire, Chief Executive of Congo Airways was elected 1st Vice Chairman of the Executive Committee while Mr. Somas Appavou, Chief Executive of Air Mauritius was elected 2nd Vice Chairman for the year 2020.

**Italian Hipster smiles
at Athens International Airport**
Ceramic, 2019 A.D.

THE ΛUTHENTIC SMILES

ATHENS
INTERNATIONAL AIRPORT
ELEFTHERIOS VENIZELOS

LUIS FELIPE DE OLIVEIRA

ALTA Executive Director & CEO

ALTA

What are the main benefits to the aviation industry of digital technology and a digitalization strategy?

According to a study carried out by Accenture, digitalization has the potential to generate approximately US$1 trillion of value for the industry and wider society over the next decade.

Due to the financial nature of the airline industry — characterized by very low profit margins and major focus on operational and safety issues — the possibility to increase efficiency, generate savings and reduce risk can largely benefit the industry and furthermore enable more people to make use of air transport. The airline industry is well-known for transferring its efficiencies to the air transport user and this has allowed that, in real terms, the rates have decreased by 16% since 2011.

gest air and ground infrastructure already collapsed in the main markets of Latin America and the Caribbean.

From a commercial point of view, digitalization can help better understand travelers needs and improve passenger experience, from the desire to travel and throughout the entire journey.

What are the main benefits to the aviation industry to employing artificial intelligence (AI)?

We have seen lots of improvements in AI with more intelligent machines capable of processing impressively large amounts of data.

According to Oliver Wyman consulting firm, by 2026, the global fleet will annually generate 98 exabytes (or 98 billion gigabytes) of data; and the newest generation of aircraft will generate between 5 and 8 terabytes per flight (up to 80 times what older planes generate today).

AI systems can reliably process all this data generated by millions of people on thousands of flights and operations in hundreds of countries, all in real time, which wouldn't be possible to manage by humans. This data translates into better business decisions.

AI is already a reality in some ALTA airlines as they are using this technology to improve customer service. GOL, for example, with its virtual assistant Gal takes care of customer needs in real time, no matter the day or hour. Other airlines have opted for more interactive and intuitive apps, self-service kiosks at airport with facial recognition capabilities, to name a few.

Maintenance, materials and repairs

According to Oliver Wyman consulting firm, advance analytics can generate between 2% and 2.5% of savings in airlines global operating costs (between US$ 5 billion and US$ 6 billion annually). This represents an important cost reduction that would benefit the entire ecosystem.

From a technical point of view, digitalization can help the industry make a smarter use of assets, anticipate the needs of the equipment and operating conditions, optimize efficiency of all processes, develop a better understanding of the business, routes, costs and opportunities of improvement, and even increase safety with more efficient surveillance and real-time communication systems.

Digitalization has demonstrated it can help improve airport security, make control processes more agile, helping operations go out on time and decon-

currently represent 6% of Latin American and Caribbean carriers total operating costs. Digitalizing MRO can effectively reduce maintenance costs, delays and aircraft downtime. Several ALTA Affiliate Members are offering these solutions, and we consider key to continue bringing this topic to meetings to better understand how airline, suppliers and regulators can define the best way to take advantage of digital systems.

According to Infosys, digital services and consulting company, IIoT (Industrial Internet of Things) systems can help to make procurement more accurate and automated by helping take better decisions on price, quality and time; can help deliver between 10% to 30% higher efficiency in inventory management compared to current MRO software tools; and can help predict demand accurately and in advance.

What changes are needed to aviation operations to ensure that digitalization and AI strategies are successful?

Regulation: regulations and regulatory frameworks will have a strong influence on digital transformation and the speed of digitization. Regulations can face major complications for cross-border integration, as in diverse countries they can be very different and may have different interpretations.

Technology and innovation are generally several steps ahead of regulation and policymaking, so institutions and governments need to work faster on new regulations in order to catch up with emerging technologies as they are developed.

Regulatory fragmentation also poses a threat; this is especially true for airlines in the Latin America region where major carriers have a holding structure, having multiple carriers in different states with multi-national operating certificates. The low level of harmonization in terms of regulation among countries in the region can affect the profitability and possible efficiencies of adopting digital technologies.

Investments in infrastructure: digital transformation is complicated and expensive by legacy technology

investments and many times airlines need to make two ends meet. One end is the very traditional legacy systems, and the other is the very fast-moving digital technology.

A single digital initiative may sound easy to implement by an airline but doing so involves changes to multiple older legacy systems, with those changes demanding a lot of human and financial resources. Airlines in their vast majority currently rely on old IT infrastructure that makes it difficult to pull out all the data together into an environment that enables them to get all the value possible from it.

Workforce readiness: Digital transformation demands different skills compared to the skills needed for legacy systems. Airlines have to adapt to this transition, with change being led by people within the organization. The main challenge will be training current and new workforce to adapt to a more digitized environment: digital transformation will lead to a reduction in process driven, low-skilled physical and administrative jobs (for example check-in staff).

On the other hand, new types of jobs will emerge empowered by technology to perform more complex tasks. Reviewing corporate culture and developing programs to train employees on new digital skills will be very important to prepare the industry's workforce for the changes ahead.

How can the aviation industry ensure that digitalization and AI strategies promote safety, security and sustainability?

The correct management and analysis of data will inevitably lead to a wider comprehension of the operation, making it possible to opportunely respond to expected and unexpected events. Digitalization furthermore helps all aviation ecosystem to be connected and in constant communication, making the entire value chain safer, more efficient and even more enjoyable.

When adopting AI strategies, companies have to review their corporate culture, have a leadership committed to embrace disruption and budget to develop training to guarantee the correct understanding of new systems.

Who (airlines, aircraft manufacturers, tech companies, trade associations, ICAO, others) is in the best position to lead the industry towards successful digital and AI implementations?

Aviation is a highly regulated industry; therefore, regulatory entities play a key role towards a successful digital implementation. Furthermore, aviation is a highly specialized industry that requires training and certifications, which make it necessary to have industry organizations, regulators and companies on board and aligned.

Once again joint and aligned work throughout the entire value chain is key. Digital implementation starts by understanding the new market needs and tools available, review corporate structures and dialogue to take the actions needed granting training, safety and correct execution.

What is the role of ICAO and of in-

dustry associations in the movement towards digitalization and AI?

Every effort from ICAO on regulations and standards, need to involve a task-force leadership team from governments and the airline industry in order to effectively launch together several custom-made and creative solutions across regions for the 3 enabling factors mentioned above. Solutions should make air transportation safer, more efficient and more accessible, by leading to:

- **Support the design of national and subnational digital plans and agendas for the expansion of the digital ecosystem.**

- **Strengthen institutional development of the digital ecosystem.**

- **Advocate for the definition of public policies to create conditions for the development of the digital economy such as data protection, privacy etc.**

- **Review and implement new procedures to drive technological change.**

- **Reduce barriers related to implementing new technologies.**

- **Develop a cyber-security legislative framework.**

- **Establish fast-paced prescription cycles (based on sufficient performance evidence, technology evolution and safety standards) on when and where human involvement and management is essential, according to each phase of technology implementation.**

- **Create, adapt and promote educational programs based on the prior prescription cycles and technology development.**

- **Digitalization and AI will reduce the cognitive load on humans but will also have a significant impact on the need for human time and resources. How can aviation best anticipate and manage that impact?**

The implementation of digitalization will require human time and resources. A change of mindset and lot of training is required to have a successful migration to a digital industry. As a result, AI and digital systems will lead to a reduction in process driven, low-skilled physical and administrative jobs (for example check-in staff). However, new types of jobs will emerge empowered by technology to perform more complex tasks. Reviewing corporate culture and developing programs to train employees on new digital skills will be fundamental to prepare the industry's workforce for the changes ahead.

What changes are needed to recruitment, management, retention and retraining practices to ensure adequate and appropriate human resources that thrive in the digitalized aviation workplace?

In the first place, embrace a corporate culture that recognizes the value of innovation, education and people.

Having a dedicated team to manage transformation is key to review current talent, the talent needed to perform the new tasks and what to do to train, attract and retain those talents.

DIGITAL TRANSFORMATION FOR AIRPORTS

GENÈVE AÉROPORT

By
ANDRÉ SCHNEIDER
CEO, Genève Aéroport

GENÈVE AÉROPORT

And
MASSIMO GENTILE
CTO, Genève Aéroport

When preparing airports for the coming decades there are four points of strategic importance that emerge as crucial challenges for our future development: enhancing capacity, lowering cost, enhancing passenger experience and advancing partnerships with key stakeholders. Digital transformation will be the most important enabler to allow for important advances regarding these four elements and safety. Therefore, it is of highest strategic importance to address these points with digital transformation. We will be in the second part detail some important strategic initiatives that can be taken. However, before addressing this, I want to stress the importance of organisational readiness to allow for such a development. As airports move ahead it will be increasingly important that the members of our board of directors and executive boards have the relevant experience and knowledge, and furthermore that the executive board includes a chief technology officer to allow that in all discussions the aspect of digital transformation is present and included form the first moment. Without such a capacity, the

board of directors will not be able to play the role to contribute to the digital strategy and the executive board will not be able to implement in all projects from their inception the actions necessary to profit fully from the power of the digital transformation.

A second important point when embracing digital transformation is to find the right balance between addressing the four strategic challenges whilst at the same time ensuring the reliability and sustainability of the systems, particularly in the face of new risks such as cyber security.
When we look in the context of Genève Aéroport at the four points of strategic importance that are enhancing capacity, lowering cost, enhancing passenger experience and advancing partnerships with key stakeholders, we can highlight the following strategic directions:

PROCESS EFFICIENCY: Genève Aéroport is extremely limited by the space available. To improve capacity, we will need to use space efficiently and use technology intelligently to optimize

resources, aircraft and baggage flows, and passenger comfort. Technology must balance the speed, efficiency and cost of all airport processes, from parking to boarding, while making the airport experience more fluid and personalized for the passenger.

PASSENGER EXPERIENCE AND REVENUE OPTIMIZATION: Passenger control is, and will remain, a major challenge for Genève Aéroport. We will have to ensure that each part of the trip is as transparent and smooth to the passenger as possible so that his or her travel experience is optimal. Passenger needs and travel patterns are changing, the services offered and the channels of communication with passengers are changing very rapidly. The gradual orientation of the business model from the airport to B2C and the need to diversify revenue sources will radically change the marketing and sales tools and associated processes.

AIRPORT SYSTEMS: The efficiency of operational processes and the improvement of the passenger experience cannot be realized without
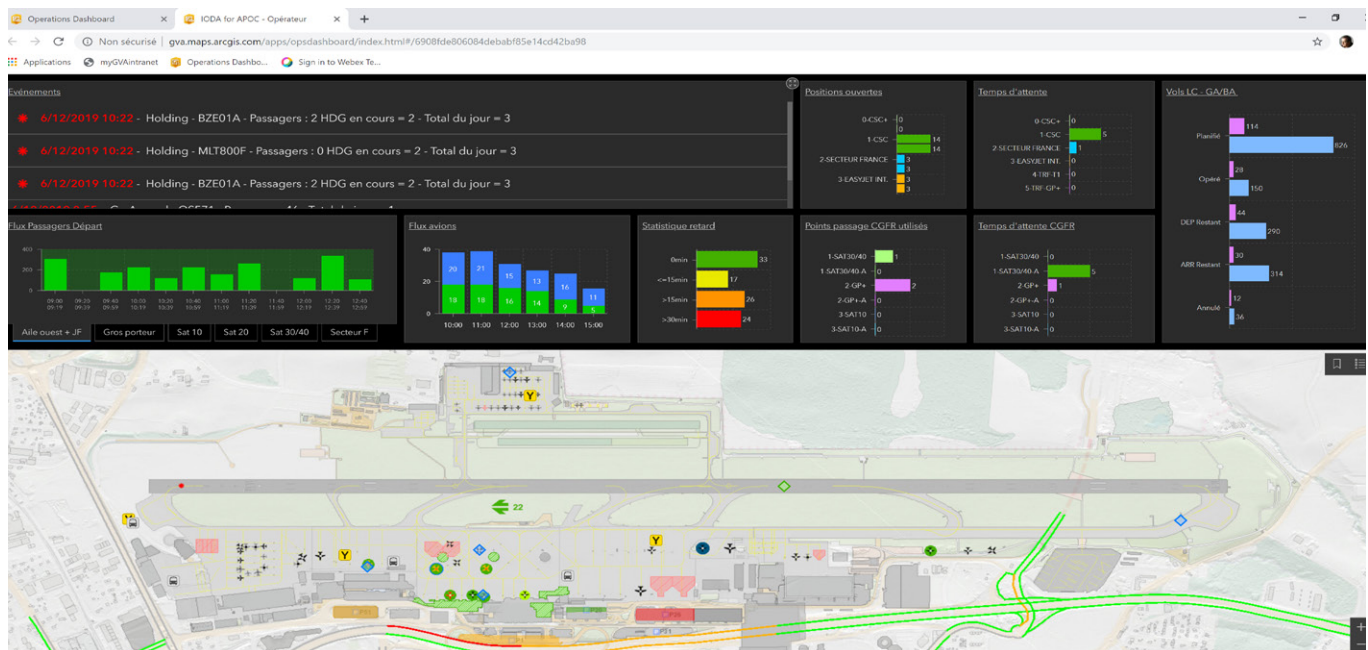
the continuous development of the historical pillars of airport systems such as the Airport Operation System (AOS), the BHS (Baggage Handling System)) or the CUTE (Common User Terminal Equipment) which allow to manage the three main flows: planes, baggage and passengers. These systems, traditionally legacy and monolithic, will likely evolve towards more modular, hybrid or even mobile solutions, in order to make them more flexible and simplify their adaptations to business needs.

SELF-SERVICE: Genève Aéroport will have to evolve its passenger management process by reinforcing the end-to-end self-service approach according to the IATA seamless travel program - check-in, baggage drop-off, identification, security, boarding - by getting rid of boarding card for the benefit of a biometric identification. The impacts in terms of technological infrastructures are and will be significant: the implementation, on a large scale, of standard solutions: Self-Service Check-in Kiosk, Self-Service Bag Tag Printer, Self-Service Bag Drop, Automated Border Control and eGates,

will demand anticipation, adequate technologies and especially a perfect collaboration with airlines, handling agents, and regulators.

COLLABORATIVE SOLUTIONS: Airport activities are characterized by a large number of stakeholders. These must be perfectly synchronized to achieve the objectives of a smooth and high added value overall operation. The aggregation and sharing of relevant information and the pooling of collaborative tools will be the key to better decision-making in the interests of the airport platform. Collaborative Decision Making (CDM) solutions will continue to evolve, applications will have to be more and more interoperable and access to data, both from the platform and from the outside facilitated. To optimize the coordination of the operations but also the non-aeronautical revenues, Genève Aéroport will have to implement a complete TAMS suite (Total Airport Management System), a solution that will provide an end-to-end control of the situation and a holistic vision of the airport platform to offer a 100% digital replica of it: a Digital Twin. Mobile access to this

information for the various partners, for the airport community, will be key. *Example our APOC information platform for all stakeholders of Genève Aéroport*

MOBILE SOLUTIONS AND ACCESS: The mobile applications developed by airports and airlines already allow passengers to access a wide range of services: from ticket reservation to the organization of transport to and from the airport, from check-in to flight status information, availability of park space to catering and shopping offers. Mobility will increasingly represent a strategic channel of communication to the passenger and will be a major facilitator of future services for the improvement of processes and passenger experience. To succeed, the next generation of mobile solution will have to erase existing silos today between the different APPs in order to provide the passenger with a solution integrating the different actors in a transparent way according to the context of the user and via the same channel.

SEP 2019:
Air Passenger Market Analysis

Chart 1 – Air passenger volumes and latest trend

Industry RPKs (billion per month)

Sources: IATA Economics, IATA Monthly Statistics

Chart 2 – RPK growth and global business confidence

Sources: IATA Economics, IATA Monthly Statistics, Markit

Chart 3 – Economic conditions (monthly data from composite PMIs, selected regions and countries)
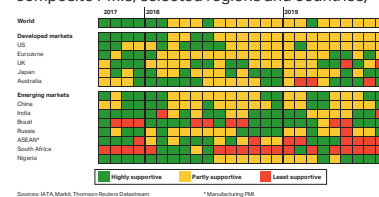
Sources: IATA, Markit, Thomson Reuters Datastream   * Manufacturing PMI

Chart 4 – Passenger load factors by region

Sources: IATA Economics, IATA Monthly Statistics   *Data from 1990 onwards

Chart 5 – International RPK growth (airline region of registration basis)
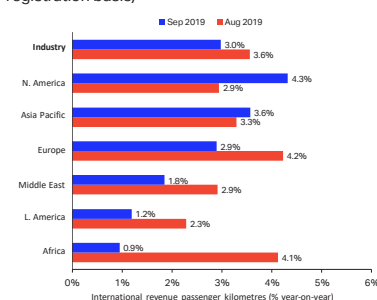
Sources: IATA Economics, IATA Monthly Statistics

Chart 6 – International RPK growth (selected markets)

RPK growth by int'l route (YTD August, % year-on-year*)
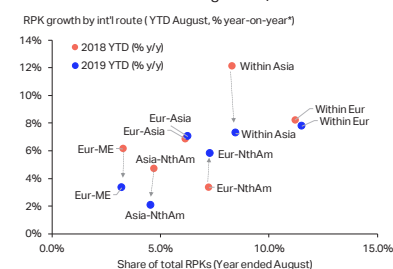
spending.

Chart 7 – Domestic RPK growth by market
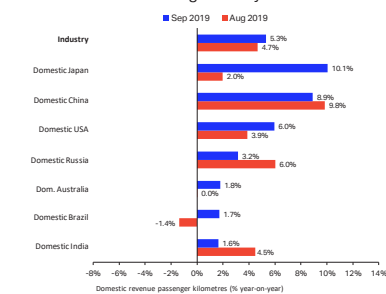
Sources: IATA Economics, IATA Monthly Statistics

Air passenger market detail - September 2019

	World share [1]	September 2019 (% year-on-year)				% year-to-date			
		RPK	ASK	PLF (%-pt) [2]	PLF (level) [3]	RPK	ASK	PLF (%-pt) [2]	PLF (level) [3]
TOTAL MARKET	*100.0%*	3.8%	3.3%	0.4%	81.9%	4.5%	3.9%	0.4%	82.9%
Africa	*2.1%*	1.7%	3.4%	-1.2%	72.1%	4.3%	4.1%	0.2%	72.0%
Asia Pacific	*34.5%*	4.8%	5.7%	-0.7%	80.1%	5.0%	5.1%	-0.1%	81.9%
Europe	*26.8%*	2.6%	2.3%	0.2%	86.6%	5.1%	4.8%	0.2%	85.5%
Latin America	*5.1%*	3.3%	1.3%	1.6%	81.9%	4.7%	3.2%	1.2%	82.8%
Middle East	*9.2%*	2.0%	0.3%	1.2%	75.0%	1.7%	0.7%	0.8%	76.6%
North America	*22.3%*	5.1%	2.7%	1.8%	82.8%	3.9%	2.7%	1.0%	85.2%
International	*63.9%*	3.0%	2.6%	0.3%	81.6%	4.3%	3.8%	0.4%	82.3%
Africa	*1.8%*	0.9%	2.5%	-1.1%	71.7%	4.3%	3.9%	0.3%	71.5%
Asia Pacific	*19.0%*	3.6%	5.0%	-1.1%	78.2%	4.3%	4.4%	0.0%	80.9%
Europe	*23.9%*	2.9%	2.5%	0.3%	86.9%	5.3%	5.0%	0.2%	85.9%
Latin America	*2.7%*	1.2%	-1.6%	2.3%	82.5%	4.2%	2.9%	1.0%	83.2%
Middle East	*8.9%*	1.8%	0.2%	1.2%	75.2%	1.9%	0.8%	0.9%	76.8%
North America	*7.6%*	4.3%	1.6%	2.2%	83.0%	3.9%	2.4%	1.2%	84.4%
Domestic	*36.1%*	5.3%	4.7%	0.5%	82.3%	4.7%	4.2%	0.4%	83.9%
Dom. Australia [4]	*0.9%*	1.8%	1.4%	0.3%	81.7%	0.1%	0.2%	-0.1%	79.4%
Dom. Brazil [4]	*1.1%*	1.7%	0.3%	1.1%	81.7%	-0.3%	-2.5%	1.8%	82.4%
Dom. China P.R. [4]	*9.5%*	8.9%	10.1%	-0.9%	83.5%	9.0%	9.6%	-0.4%	85.0%
Domestic India [4]	*1.6%*	1.6%	-0.4%	1.7%	85.8%	4.8%	4.6%	0.2%	87.4%
Domestic Japan [4]	*1.1%*	10.1%	6.5%	2.5%	77.9%	4.5%	3.4%	0.8%	73.3%
Dom. Russian Fed. [4]	*1.5%*	3.2%	5.5%	-1.9%	85.7%	7.6%	7.8%	-0.1%	83.9%
Domestic US [4]	*14.0%*	6.0%	3.8%	1.7%	82.7%	4.3%	3.2%	0.9%	85.7%

[1] % of industry RPKs in 2018   [2] Year-on-year change in load factor   [3] Load factor level

[4] Note: the seven domestic passenger markets for w hich broken-dow n data are available account for 30% of global total RPKs and approximately 82% of total domestic RPKs

Note: The total industry and regional grow th rates are based on a constant sample of airlines combining reported data and estimates for missing observations. Airline traffic is allocated according to the region in w hich the carrier is registered; it should not be considered as regional traffic.

OCT 2019:
Air Passenger Market Analysis

Chart 1 – Air passenger volumes and latest trend

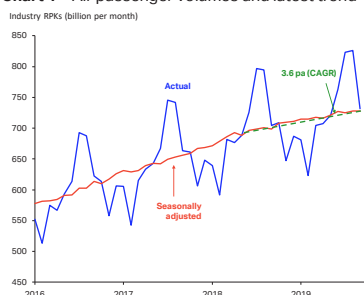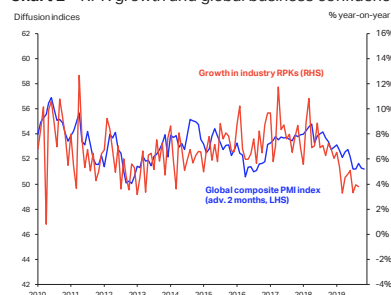Industry RPKs (billion per month)

Chart 2 – RPK growth and global business confidence

Sources: IATA Economics, IATA Monthly Statistics, Markit

Chart 3 – Economic conditions (monthly data from composite PMIs, selected regions and countries)

Sources: IATA, Markit, Thomson Reuters Datastream   * Manufacturing PMI
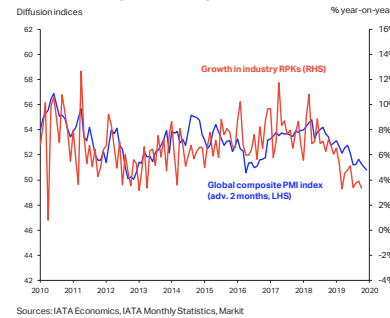
Another month of record-high load factors...

Industry-wide available seat kilometres (ASKs) grew by a modest 2.2% year-on-year in October, 1.2ppt

Chart 4 – Passenger load factors by region

Sources: IATA Economics, IATA Monthly Statistics   *Data from 1990 onwards
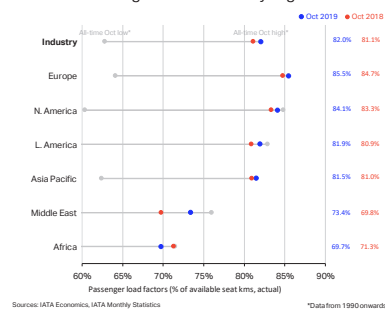
**Chart 5 –** International RPK growth (airline region of registration basis)

Chart 7 – Domestic RPK growth by market

Sources: IATA Economics, IATA Monthly Statistics
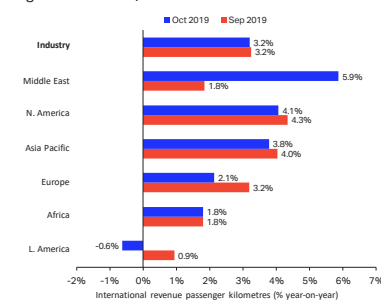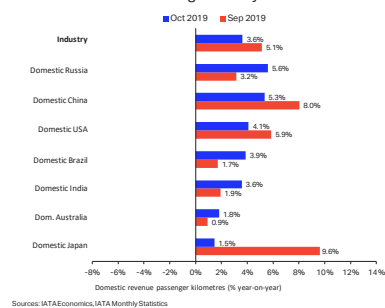
Air passenger market detail - October 2019

	World share [1]	October 2019 (% year-on-year)				% year-to-date			
		RPK	ASK	PLF (%-pt)[2]	PLF (level)[3]	RPK	ASK	PLF (%-pt)[2]	PLF (level)[3]
TOTAL MARKET	*100.0%*	**3.4%**	**2.2%**	**0.9%**	**82.0%**	**4.3%**	**3.8%**	**0.5%**	**82.8%**
Africa	*2.1%*	3.0%	5.3%	-1.6%	69.7%	4.3%	4.3%	0.0%	71.8%
Asia Pacific	*34.5%*	3.6%	2.9%	0.5%	81.5%	4.8%	4.8%	0.0%	81.9%
Europe	*26.8%*	2.2%	1.4%	0.7%	85.5%	4.9%	4.6%	0.2%	85.5%
Latin America	*5.1%*	2.7%	1.4%	1.1%	81.9%	4.6%	3.1%	1.2%	82.7%
Middle East	*9.2%*	5.5%	0.3%	3.6%	73.4%	2.1%	0.6%	1.1%	76.3%
North America	*22.3%*	3.9%	2.9%	0.8%	84.1%	3.8%	2.6%	1.0%	85.0%
International	*63.9%*	**3.2%**	**1.6%**	**1.3%**	**81.0%**	**4.3%**	**3.6%**	**0.5%**	**82.2%**
Africa	*1.8%*	1.8%	3.6%	-1.3%	69.0%	4.2%	3.9%	0.2%	71.3%
Asia Pacific	*19.0%*	3.8%	2.7%	0.9%	79.6%	4.4%	4.2%	0.1%	80.8%
Europe	*23.9%*	2.1%	1.3%	0.7%	85.7%	5.1%	4.8%	0.2%	85.8%
Latin America	*2.7%*	-0.6%	-2.3%	1.4%	81.4%	3.7%	2.3%	1.1%	83.0%
Middle East	*8.9%*	5.9%	0.3%	3.9%	73.5%	2.3%	0.7%	1.2%	76.4%
North America	*7.6%*	4.1%	2.0%	1.6%	82.1%	3.9%	2.3%	1.2%	84.2%
Domestic	*36.1%*	**3.6%**	**3.4%**	**0.2%**	**83.9%**	**4.5%**	**4.0%**	**0.4%**	**83.9%**
Dom. Australia [4]	*0.9%*	1.8%	0.5%	1.1%	82.8%	0.1%	0.0%	0.0%	79.8%
Domestic Brazil [4]	*1.1%*	3.9%	0.7%	2.6%	84.0%	0.1%	-2.2%	1.9%	82.6%
Dom. China P.R. [4]	*9.5%*	5.3%	6.1%	-0.6%	85.4%	8.5%	9.0%	-0.4%	85.0%
Domestic India [4]	*1.6%*	3.6%	2.8%	0.6%	83.7%	4.7%	4.4%	0.2%	87.0%
Domestic Japan [4]	*1.1%*	1.5%	-0.1%	1.2%	77.4%	4.1%	3.0%	0.8%	73.7%
Dom. Russian Fed. [4]	*1.5%*	5.6%	5.0%	0.5%	84.7%	7.4%	7.5%	-0.1%	84.0%
Domestic US [4]	*14.0%*	4.1%	3.6%	0.4%	85.4%	4.1%	3.2%	0.8%	85.6%

[1] % of industry RPKs in 2018   [2] Year-on-year change in load factor   [3] Load factor level

[4] Note: the seven domestic passenger markets for which broken-down data are available account for 30% of global total RPKs and approximately 82% of total domestic RPKs

Note: The total industry and regional growth rates are based on a constant sample of airlines combining reported data and estimates for missing observations. Airline traffic is allocated according to the region in which the carrier is registered; it should not be considered as regional traffic.

NOV 2019:
Air Passenger Market Analysis

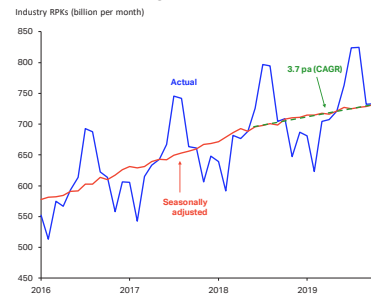## Chart 1 – Air passenger volumes and latest trend

Industry RPKs (billion per month)

Chart 2 – Contribution to annual RPK growth (airline region of registration)

Percentage points

Latin America ■ Africa ■
Middle East ■ North America ■
Europe ■ Asia Pacific ■
✕ Total

Sources: IATA Economics, IATA Monthly Statistics
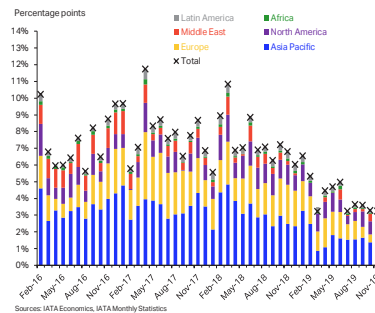
Chart 3 – RPK growth and global business confidence

Diffusion indices — % year-on-year

Growth in industry RPKs (RHS)

Global composite PMI index (adv. 2 months, LHS)
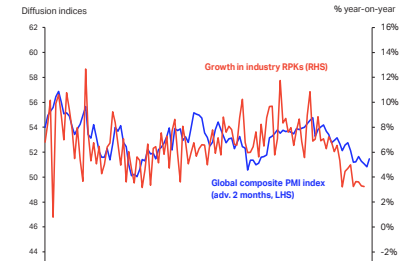
Chart 4 – Economic conditions (monthly data from composite PMIs, selected regions and countries)

Business confidence
Legend: >50 and rising = green; >50 but stable or falling = yellow; <50 = red

World
Developed markets: US, Eurozone, UK, Japan, Australia
Emerging markets: China, India, Brazil, Russia, ASEAN*, South Africa, Nigeria

Highly supportive ■ Partly supportive ■ Least supportive ■

Sources: IATA, Markit, Thomson Reuters Datastream   * Manufacturing PMI
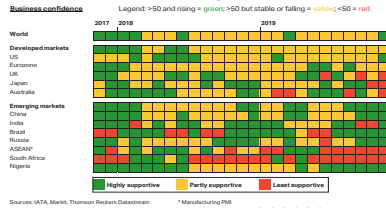
Chart 5 – Passenger load factors by region

Nov 2019 ● Nov 2018 ●

	Nov 2019	Nov 2018
Industry	81.1%	80.0%
Europe	83.3%	81.7%
N. America	82.8%	83.7%
L. America	82.2%	82.2%
Asia Pacific	81.3%	80.3%
Middle East	73.2%	68.2%
Africa	70.8%	70.1%

Passenger load factors (% of available seat kms, actual)

Sources: IATA Economics, IATA Monthly Statistics   *Data from 1990 onwards

Chart 6 – International RPK growth (airline region of registration basis)

Nov 2019 ■ Oct 2019 ■

	Nov 2019	Oct 2019
Industry	3.1%	3.0%
Middle East	7.4%	5.6%
Africa	4.9%	2.3%
Asia Pacific	3.9%	4.2%
N. America	2.3%	3.6%
Europe	1.2%	1.6%
L. America	-0.3%	-0.3%

International revenue passenger kilometres (% year-on-year)

Chart 7 – Domestic RPK growth by market

Nov 2019 ■ Oct 2019 ■

	Nov 2019	Oct 2019
Industry	3.5%	3.7%
Domestic India	11.3%	4.2%
Domestic China	5.3%	5.9%
Domestic Japan	3.7%	1.8%
Domestic USA	2.4%	4.0%
Domestic Russia	2.4%	5.6%
Domestic Brazil	1.4%	3.9%
Dom. Australia	1.1%	2.0%

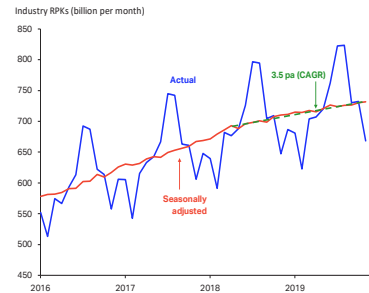Domestic revenue passenger kilometres (% year-on-year)

Sources: IATA Economics, IATA Monthly Statistics

Air passenger market detail - November 2019

	World share [1]	November 2019 (% year-on-year)				% year-to-date			
		RPK	ASK	PLF (%-pt)[2]	PLF (level)[3]	RPK	ASK	PLF (%-pt)[2]	PLF (level)[3]
TOTAL MARKET	**100.0%**	**3.3%**	**1.8%**	**1.1%**	**81.1%**	**4.2%**	**3.5%**	**0.5%**	**82.6%**
Africa	2.1%	3.5%	2.5%	0.6%	70.8%	4.8%	4.7%	0.1%	71.7%
Asia Pacific	34.5%	4.4%	3.2%	1.0%	81.3%	4.9%	4.8%	0.1%	81.9%
Europe	26.8%	1.3%	-0.7%	1.6%	83.3%	4.2%	3.7%	0.4%	85.3%
Latin America	5.1%	2.0%	2.0%	0.0%	82.2%	4.5%	3.2%	1.0%	82.6%
Middle East	9.2%	7.2%	-0.1%	5.0%	73.2%	2.0%	0.1%	1.4%	76.0%
North America	22.3%	2.3%	3.4%	-0.9%	82.8%	3.6%	2.7%	0.8%	84.8%
International	**63.9%**	**3.1%**	**0.7%**	**1.8%**	**80.1%**	**4.0%**	**3.2%**	**0.7%**	**82.0%**
Africa	1.8%	4.9%	2.8%	1.4%	70.3%	4.9%	4.5%	0.3%	71.2%
Asia Pacific	19.0%	3.9%	2.8%	0.8%	79.9%	4.5%	4.2%	0.2%	80.8%
Europe	23.9%	1.2%	-1.1%	1.8%	83.8%	4.4%	3.8%	0.4%	85.7%
Latin America	2.7%	-0.3%	-1.8%	1.3%	82.1%	3.4%	2.0%	1.1%	82.9%
Middle East	8.9%	7.4%	0.0%	5.0%	73.2%	2.2%	0.2%	1.5%	76.2%
North America	7.6%	2.3%	1.6%	0.6%	81.2%	3.7%	2.2%	1.2%	84.0%
Domestic	**36.1%**	**3.5%**	**3.8%**	**-0.2%**	**82.8%**	**4.4%**	**4.1%**	**0.3%**	**83.8%**
Dom. Australia[4]	0.9%	1.1%	0.2%	0.8%	83.2%	0.2%	0.0%	0.1%	80.1%
Domestic Brazil[4]	1.1%	1.4%	2.5%	-0.9%	82.7%	0.3%	-1.7%	1.6%	82.6%
Dom. China P.R.[4]	9.5%	5.3%	4.7%	0.5%	83.2%	8.3%	8.7%	-0.3%	84.9%
Domestic India[4]	1.6%	11.3%	5.0%	5.1%	89.4%	5.4%	4.6%	0.7%	87.2%
Domestic Japan[4]	1.1%	3.7%	2.2%	1.1%	78.7%	4.1%	2.9%	0.8%	74.1%
Dom. Russian Fed.[4]	1.5%	2.4%	4.7%	-1.8%	80.0%	7.0%	7.3%	-0.2%	83.6%
Domestic US[4]	14.0%	2.4%	4.4%	-1.6%	83.7%	3.9%	3.3%	0.5%	85.4%

[1] % of industry RPKs in 2018   [2] Year-on-year change in load factor   [3] Load factor level

[4] Note: the seven domestic passenger markets for which broken-down data are available account for 30% of global total RPKs and approximately 82% of total domestic RPKs

Note: The total industry and regional growth rates are based on a constant sample of airlines combining reported data and estimates for missing observations. Airline traffic is allocated according to the region in which the carrier is registrated; it should not be considered as regional traffic.

STATISTICS

JUL 2019: Worldwide Traffic Results

Passenger traffic/Freight volumes
(*Summary*)

TABLE 1: SUMMARY WORLDWIDE TRAFFIC RESULTS, AUGUST 2019 (% CHANGE)

	August 2019 over August 2018	Year to date 2019	12-month rolling year
PaxFlash			
International passenger	3.6	4.5	5.0
Domestic passenger	1.4	2.1	2.7
Total passenger	2.5	3.2	3.7
FreightFlash			
International freight	(6.6)	(4.6)	(2.8)
Domestic freight	(1.3)	0.9	1.3
Total freight	(5.0)	(2.9)	(1.6)

TABLE 2: PaxFlash summary – August 2019

Regions	August 2019 % YOY	YTD August 2019 % YOY	YE thru August 2019 % YOY
International passengers			
Africa	7.6	7.9	9.4
Asia-Pacific	2.9	4.3	4.5
Europe	4.2	4.8	5.5
Latin America-Caribbean	2.3	3.2	3.6
Middle East	2.4	2.6	2.5
North America	2.0	3.9	5.0
World	3.6	4.5	5.0
Domestic passengers			
Africa	4.4	5.6	5.7
Asia-Pacific	1.0	0.4	1.2
Europe	(1.4)	0.7	1.6
Latin America-Caribbean	3.1	4.8	5.2
Middle East	…	…	…
North America	2.5	3.4	3.6
World	1.4	2.1	2.7
Total passengers			
Africa	6.6	7.1	8.2
Asia-Pacific	1.6	1.8	2.3
Europe	2.9	3.8	4.5
Latin America-Caribbean	2.8	4.2	4.6
Middle East	1.7	2.0	2.1
North America	2.4	3.4	3.8
World	2.5	3.2	3.7

TRAFFIC TABLE DEFINITIONS:

PASSENGER TRAFFIC: departing + arriving passengers
INTERNATIONAL: traffic performed between the designated airport and an airport in another country/territory
DOMESTIC: traffic performed between two airports located in the same country/territory
TOTAL: international + domestic passengers + direct transit passengers counted once (when breakdown is available)
Year-over-year percentage changes (% YOY) are calculated from a representative sample.

YOY   Year-over-year same month comparison
YTD   Year to date, starting Jan 2019, compared to same period in previous year
YE   Year end, based on a rolling 12-month period, compared to the same prior 12-month perio

STATISTICS

JUL 2019: Worldwide Traffic Results
Passenger traffic/Freight volumes
(*Summary*)

TABLE 3: FreightFlash summary – August 2019			
Regions	August 2019 % YOY	YTD August 2019 % YOY	YE thru August 2019 % YOY
International freight			
Africa	(11.1)	0.4	6.1
Asia-Pacific	(8.1)	(6.5)	(4.4)
Europe	(4.0)	(3.2)	(2.1)
Latin America-Caribbean	(4.2)	(3.2)	(1.4)
Middle East	(5.9)	(3.3)	(2.1)
North America	(7.7)	(4.6)	(2.4)
World	(6.6)	(4.6)	(2.8)
Domestic freight			
Africa	...	...	...
Asia-Pacific	(3.6)	(4.2)	(2.9)
Europe	4.8	1.2	1.5
Latin America-Caribbean	(7.7)	0.7	2.7
Middle East	...	...	...
North America	(0.0)	3.6	3.5
World	(1.3)	0.9	1.3
Total freight			
Africa	(10.3)	0.7	6.1
Asia-Pacific	(6.8)	(5.9)	(4.0)
Europe	(3.7)	(2.9)	(2.0)
Latin America-Caribbean	(5.2)	(2.2)	(0.4)
Middle East	(5.9)	(3.0)	(1.8)
North America	(3.2)	0.2	1.0
World	(5.0)	(2.9)	(1.6)

TRAFFIC TABLE DEFINITIONS:

FREIGHT TRAFFIC: loaded and unloaded freight; data in metric tonnes
INTERNATIONAL: traffic performed between the designated airport and an airport in another country/territory
DOMESTIC: traffic performed between two airports located in the same country/territory
TOTAL: international + domestic freight (when breakdown is available)
Note: No domestic freight traffic is reported by airports in the Middle East and Africa regions.
Year-over-year percentage changes (% YOY) are calculated from a representative sample.

YOY   Year-over-year same month comparison
YTD   Year to date, starting Jan 2019, compared to same period in previous year
YE   Year end, based on a rolling 12-month period, compared to same prior 12-month period

SEP 2019: Worldwide Traffic Results

Passenger traffic/Freight volumes
(*Summary*)

ACI
AIRPORTS COUNCIL INTERNATIONAL

TABLE 1: SUMMARY WORLDWIDE TRAFFIC RESULTS, SEPTEMBER 2019 (% CHANGE)

	September 2019 over September 2018	Year to date 2019	12-month rolling year
PaxFlash			
International passenger	2.9	4.3	4.8
Domestic passenger	2.4	2.2	2.6
Total passenger	2.6	3.1	3.6
FreightFlash			
International freight	(4.2)	(4.7)	(3.4)
Domestic freight	(4.0)	0.4	0.8
Total freight	(4.2)	(3.1)	(2.2)

TABLE 2: PaxFlash summary – September 2019

Regions	September 2019 % YOY	YTD September 2019 % YOY	YE thru September 2019 % YOY
International passengers			
Africa	4.6	7.6	8.6
Asia-Pacific	3.6	4.2	4.4
Europe	3.3	4.6	5.3
Latin America-Caribbean	0.7	3.1	3.4
Middle East	0.4	2.5	2.6
North America	1.5	3.6	4.4
World	2.9	4.3	4.8
Domestic passengers			
Africa	11.4	6.9	6.8
Asia-Pacific	1.3	0.4	1.0
Europe	(1.8)	0.4	1.1
Latin America-Caribbean	3.7	5.5	6.0
Middle East	...	...	...
North America	4.1	3.4	3.4
World	2.4	2.2	2.6
Total passengers			
Africa	6.7	7.3	8.0
Asia-Pacific	2.0	1.7	2.2
Europe	2.1	3.6	4.2
Latin America-Caribbean	2.7	4.7	5.1
Middle East	2.2	2.4	2.5
North America	3.7	3.4	3.6
World	2.6	3.1	3.6

TRAFFIC TABLE DEFINITIONS:

PASSENGER TRAFFIC: departing + arriving passengers
INTERNATIONAL: traffic performed between the designated airport and an airport in another country/territory
DOMESTIC: traffic performed between two airports located in the same country/territory
TOTAL: international + domestic passengers + direct transit passengers counted once (when breakdown is available)
Year-over-year percentage changes (% YOY) are calculated from a representative sample.

YOY   Year-over-year same month comparison
YTD   Year to date, starting Jan 2019, compared to same period in previous year
YE   Year end, based on a rolling 12-month period, compared to the same prior 12-month perio

ACI
AIRPORTS COUNCIL
INTERNATIONAL

SEP 2019: Worldwide Traffic Results
Passenger traffic/Freight volumes
(Summary)

TABLE 3: FreightFlash summary – September 2019

Regions	September 2019 % YOY	YTD September 2019 % YOY	YE thru September 2019 % YOY
International freight			
Africa	(7.3)	(0.1)	3.3
Asia-Pacific	(3.1)	(6.4)	(5.0)
Europe	(2.8)	(3.1)	(2.4)
Latin America-Caribbean	(5.1)	(3.7)	(2.5)
Middle East	(6.7)	(3.3)	(2.5)
North America	(6.7)	(4.8)	(3.1)
World	(4.2)	(4.7)	(3.4)
Domestic freight			
Africa	...	...	...
Asia-Pacific	(6.2)	(4.2)	(3.2)
Europe	7.5	1.5	2.2
Latin America-Caribbean	(6.6)	(0.3)	0.9
Middle East	...	...	...
North America	(3.3)	2.9	2.8
World	(4.0)	0.4	0.8
Total freight			
Africa	(6.4)	0.3	3.4
Asia-Pacific	(3.9)	(5.8)	(4.5)
Europe	(2.4)	(2.9)	(2.2)
Latin America-Caribbean	(5.5)	(2.7)	(1.5)
Middle East	(6.7)	(3.0)	(2.2)
North America	(4.8)	(0.3)	0.4
World	(4.2)	(3.1)	(2.2)

TRAFFIC TABLE DEFINITIONS:

FREIGHT TRAFFIC: loaded and unloaded freight; data in metric tonnes
INTERNATIONAL: traffic performed between the designated airport and an airport in another country/territory
DOMESTIC: traffic performed between two airports located in the same country/territory
TOTAL: international + domestic freight (when breakdown is available)
Note: No domestic freight traffic is reported by airports in the Middle East and Africa regions.
Year-over-year percentage changes (% YOY) are calculated from a representative sample.

YOY   Year-over-year same month comparison
YTD   Year to date, starting Jan 2019, compared to same period in previous year
YE   Year end, based on a rolling 12-month period, compared to same prior 12-month period

OCT 2019: Worldwide Traffic Results

Passenger traffic/Freight volumes
(*Summary*)

Table 1: Summary Worldwide Traffic Results, OCTOBER 2019 (% change)

	October 2019 over October 2018	Year to date 2019	12-month rolling year
PaxFlash			
International passenger	3.2	4.2	4.5
Domestic passenger	1.5	2.1	2.2
Total passenger	2.3	3.0	3.3
FreightFlash			
International freight	(4.5)	(4.5)	(3.8)
Domestic freight	0.7	0.6	0.4
Total freight	(2.9)	(3.0)	(2.6)

TABLE 2: PaxFlash summary – October 2019

Regions	October 2019 % YOY	YTD October 2019 % YOY	YE thru October 2019 % YOY
International passengers			
Africa	4.2	7.3	7.9
Asia-Pacific	2.8	4.1	4.2
Europe	3.4	4.5	5.0
Latin America-Caribbean	0.1	2.4	2.6
Middle East	6.2	2.8	2.8
North America	2.3	3.6	4.1
World	3.2	4.2	4.5
Domestic passengers			
Africa	4.4	6.0	6.1
Asia-Pacific	0.2	0.4	0.7
Europe	(2.3)	0.0	0.4
Latin America-Caribbean	4.4	4.6	4.7
Middle East	...	...	...
North America	3.4	3.5	3.5
World	1.5	2.1	2.2
Total passengers			
Africa	5.2	6.9	7.4
Asia-Pacific	1.1	1.7	1.9
Europe	2.0	3.4	3.8
Latin America-Caribbean	3.1	3.9	4.0
Middle East	5.2	2.2	2.3
North America	3.2	3.5	3.6
World	2.3	3.0	3.3

TRAFFIC TABLE DEFINITIONS:

PASSENGER TRAFFIC: departing + arriving passengers
INTERNATIONAL: traffic performed between the designated airport and an airport in another country/territory
DOMESTIC: traffic performed between two airports located in the same country/territory
TOTAL: international + domestic passengers + direct transit passengers counted once (when breakdown is available)
Year-over-year percentage changes (% YOY) are calculated from a representative sample.

YOY   Year-over-year same month comparison
YTD   Year to date, starting Jan 2019, compared to same period in previous year
YE   Year end, based on a rolling 12-month period, compared to the same prior 12-month perio

OCT 2019: Worldwide Traffic Results
Passenger traffic/Freight volumes
(Summary)

AIRPORTS COUNCIL INTERNATIONAL

TABLE 3: FreightFlash summary – October 2019			
Regions	October 2019 % YOY	YTD October 2019 % YOY	YE thru October 2019 % YOY
International freight			
Africa	(4.1)	(0.6)	2.7
Asia-Pacific	(5.7)	(6.2)	(5.5)
Europe	(1.6)	(2.9)	(2.7)
Latin America-Caribbean	(9.7)	(4.0)	(3.4)
Middle East	(4.0)	(3.4)	(2.9)
North America	(5.2)	(4.9)	(3.8)
World	(4.5)	(4.5)	(3.8)
Domestic freight			
Africa	...	...	...
Asia-Pacific	0.3	(3.9)	(3.4)
Europe	3.5	1.6	1.9
Latin America-Caribbean	(3.7)	(0.6)	(0.2)
Middle East	...	...	...
North America	1.1	2.9	2.4
World	0.7	0.6	0.4
Total freight			
Africa	(3.4)	(0.2)	2.8
Asia-Pacific	(4.0)	(5.5)	(4.9)
Europe	(1.4)	(2.7)	(2.4)
Latin America-Caribbean	(8.0)	(3.1)	(2.5)
Middle East	(4.0)	(3.1)	(2.7)
North America	(1.5)	(0.3)	(0.2)
World	(2.9)	(3.0)	(2.6)

TRAFFIC TABLE DEFINITIONS:

FREIGHT TRAFFIC: loaded and unloaded freight; data in metric tonnes
INTERNATIONAL: traffic performed between the designated airport and an airport in another country/territory
DOMESTIC: traffic performed between two airports located in the same country/territory
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Note: No domestic freight traffic is reported by airports in the Middle East and Africa regions.
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YOY   Year-over-year same month comparison
YTD   Year to date, starting Jan 2019, compared to same period in previous year
YE   Year end, based on a rolling 12-month period, compared to same prior 12-month period

STATISTICS

ECONOMIC DEVELOPMENT
AUG 2019: Air Transport Monthly Monitor

World Results and Analyses for MAY 2019. Total scheduled services
(Domestic and international)

GLOBAL KEY FIGURES	AUG 2019 *(versus AUG 2018)*	OUTLOOK* - SEP 2019 *(versus SEP 2018)*
	RPK ▲ +3.8% ASK ▲ +3.5% FTK ▼ -3.9% LF: 85.7% ► 0.0 pt	ASK ▲ +3.1% * Source OAG

PASSENGER TRAFFIC
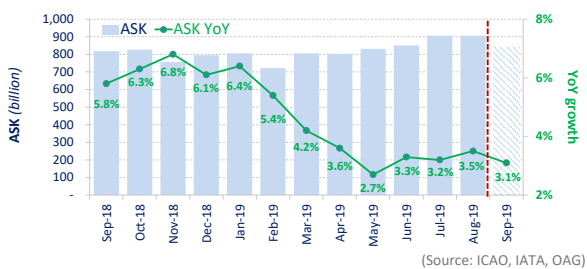
Revenue Passenger-Kilometres - RPK

World passenger traffic grew by +3.8% YoY in August 2019, +0.2 percentage point higher than the growth in the previous month. Performance by region was a mix, with Europe and Latin America/Caribbean posting improvements while Asia/Pacific, the Middle East and North America trending downward and Africa remained unchanged. Asia/Pacific continued to be the fastest growing region albeit with slight slowdown, followed by Africa. China remained as the strongest growing domestic market, followed by the Russian Federation.

(Source: ICAO, IATA, OAG)

International Traffic vs. Tourist Arrivals

International passenger traffic grew by +3.3% YoY in August 2019, +0.6 percentage point higher than the growth in the previous month. Unlike total passenger traffic, all regions, except for Latin America/Caribbean, accelerated in international passenger traffic growth, with the most notable increase in the Middle East.

The growth of international tourist arrivals* remained relatively stable.

*UNWTO Definition

(Source: IATA, UNWTO)

CAPACITY

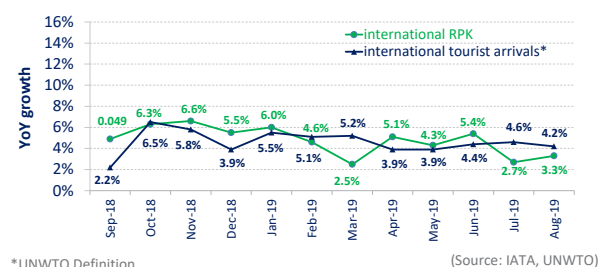### Available Seat-Kilometres - ASK

Capacity worldwide increased by +3.5% YoY in August 2019, +0.3 percentage point higher than the growth in the previous month (+3.2%).

According to the airline schedules, capacity expansion is expected to slow down slightly to +3.1% in September 2019.

(Source: ICAO, IATA, OAG)

Load Factor - LF

The passenger Load Factor reached 85.7% in August 2019, same as previous month. It was the highest LF recorded in the last twelve months.

As traffic growth outpaced the capacity expansion, the August LF was +0.4 percentage point higher compared to the rate in the same period of 2018.
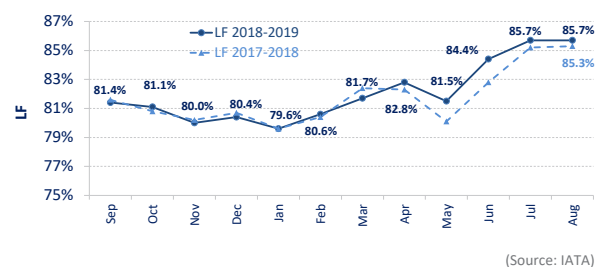
(Source: IATA)

FREIGHT TRAFFIC

Freight Tonne-Kilometres - FTK

World freight traffic reported a decline of -3.9% YoY in August 2019, -0.7 percentage point lower than the growth in the previous month. Freight traffic has been impacted by the sluggish global trade and softening economic conditions in some key markets. On the positive side, Africa continued to expand solidly despite a slowdown, supported by the strengthening in trade between Africa and Asia/Pacific. For the fourth consecutive month, the Middle East experienced the slowest growth, followed by Asia/Pacific. Accounting for over one third of the world freight traffic, Asia/Pacific was the main contributor to the overall decline.
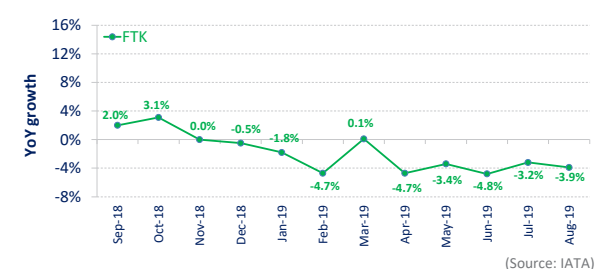
(Source: IATA)

ACRONYMS: **ACI:** Airports Council International; **ASK:** Available Seat-Kilometres; **IATA:** International Air Transport Association; **FTK:** Freight Tonne-Kilometres; **LF:** Passenger Load Factor; **OAG:** Official Airline Guide; **RPK:** Revenue Passenger-Kilometres; **UNWTO:** World Tourism Organization; **YoY:** Year-on-year; **YTD:** Year-to-date.

STATISTICS

ICAO | ECONOMIC DEVELOPMENT
AUG 2019: Air Transport Monthly Monitor
World Results and Analyses for MAY 2019. Total scheduled services
(Domestic and international)

TOP 15 AIRPORTS (Ranked by aircraft departures, passengers and volume of freight)

AUG 2019: +2.0%, +1.3%, and -5.8% YoY in terms of aircraft departures, passengers and freight for the Top 15

AUG 19

Airports (ranking by number of departures)	Departures	YoY	Airports (ranking by number of passengers)	Passengers*	YoY	Airports (ranking by tonnes of freight)	Freight**	YoY
Chicago IL, US (ORD)	41,508	1.7%	Atlanta GA, US (ATL)	4,942,616	2.2%	Hong Kong, CN (HKG)	373,000	-11.9%
Atlanta GA, US (ATL)	40,495	0.3%	Beijing, CN (PEK)	4,513,500	-0.2%	Memphis TN, US (MEM)	363,897	-7.0%
Dallas/Fort Worth TX, US (DFW)	33,010	9.9%	Dubai, AE (DXB)	4,112,528	-1.8%	Shanghai, CN (PVG)	292,180	-5.3%
Los Angeles CA, US (LAX)	30,895	-2.1%	Chicago IL, US (ORD)	4,096,808	1.2%	Louisville KY, US (SDF)	233,546	9.3%
Denver CO, US (DEN)	29,146	7.0%	Los Angeles CA, US (LAX)	4,068,438	0.0%	Anchorage AK, US (ANC)	226,823	-9.5%
Beijing, CN (PEK)	25,815	-1.4%	Tokyo, JP (HND)	4,004,318	-7.3%	Incheon, KR (ICN)	219,672	-6.5%
Charlotte NC, US (CLT)	24,717	1.6%	London, GB (LHR)	3,840,514	0.1%	Dubai, AE (DXB)	202,900	-7.6%
Paris, FR (CDG)	23,601	3.0%	Paris, FR (CDG)	3,737,103	4.3%	Taipei, CN (TPE)	182,892	-7.0%
Amsterdam, NL (AMS)	23,331	-0.9%	Frankfurt, DE (FRA)	3,458,371	1.8%	Doha, QA (DOH)	174,136	-0.8%
Frankfurt, DE (FRA)	23,198	0.2%	Dallas/Fort Worth TX, US (DFW)	3,436,534	10.1%	Los Angeles CA, US (LAX)	169,133	-9.8%
San Francisco CA, US (SFO)	22,350	5.0%	Amsterdam, NL (AMS)	3,405,380	-0.5%	Singapore, SG (SIN)	169,000	-8.1%
Seattle WA, US (SEA)	21,615	2.6%	Istanbul, TR (IST)	3,370,301	0.0%	Miami FL, US (MIA)	164,067	-0.7%
Shanghai, CN (PVG)	21,234	0.2%	Shanghai, CN (PVG)	3,354,382	1.0%	Frankfurt, DE (FRA)	163,213	-5.9%
Guangzhou, CN (CAN)	21,142	3.4%	Guangzhou, CN (CAN)	3,290,413	6.4%	Beijing, CN (PEK)	161,040	-8.1%
London, GB (LHR)	21,068	0.5%	Denver CO, US (DEN)	3,228,337	8.1%	Guangzhou, CN (CAN)	153,935	2.3%

Note: Total scheduled and non-scheduled services

(Source: ACI)

In terms of **aircraft departures**, the Top 15 airports reported a growth of **+2.0%** YoY. Twelve out of the Top 15 airports posted YoY increases. **Chicago** ranked **1st** with a modest growth of **+1.7%**. The strongest growth in operations was recorded by **Dallas/Fort Worth** at **+9.9%**, followed by **Denver** at **+7.0%**.

In terms of **passengers**, the Top 15 airports reported a growth of **+1.3%** YoY. Nine out of the Top 15 airports posted YoY increases. **Atlanta** remained at **1st** with a growth of **+2.2%**, followed by **Beijing** and **Dubai**, albeit with declines. The most significant increase was recorded by **Dallas/Fort Worth** at **+10.1%**. **Tokyo** continued to post decreases and further contracted by **-7.3%**.

In terms of **freight**, the Top 15 airports reported a decline of **-5.8%** YoY. All the Top 15 airports posted declines, except for Louisiville and Guangzhou. The most significant decrease was posted by Hong Kong at **-11.9%**, followed by Los Angeles (-9.8%) and Anchorage (-9.5%). Owing to the strengthening of its hub position of UPS, **Louisville** continued to record strong growth at **+9.3%**.

TOP 15 AIRLINE GROUPS (Ranked by RPK)

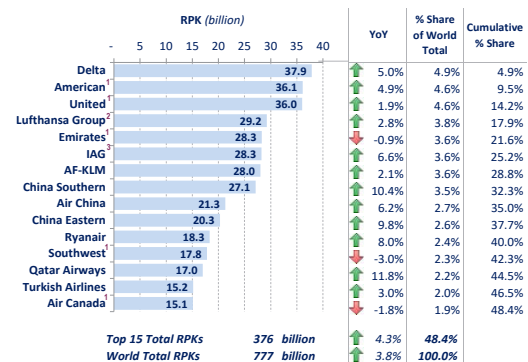**AUG 2019: +4.3% YoY in terms of RPK for the Top 15**

In terms of RPK, the Top 15 airline groups accounted for 48.4% of the world's total RPK in August 2019 and grew by +4.3% YoY. This growth was +0.5 percentage point higher than the world's average on scheduled services. Twelve out of the Top 15 airline groups posted YoY growth.

Delta remained at **1st** with a solid growth of **+5.0%**. Followed were **American** and **United**, growing at **+4.9%** and **+1.9%**, respectively. **Southwest** continued to post a decline and was 2 positions down to **12th**. **Air Canada** remained at **15th**, albeit with a negative growth of **-1.8%**.

Despite a decline of **-0.9%** YoY, **Emirates** remained at **5th**. The other carrier in the region, **Qatar Airways**, recorded the fastest growth among the Top 15 with an increase of **+11.8%**, and maintained its position at **13th**.

Lufthansa, **IAG** and **AF-KLM** retained their position of **4th**, **6th** and **7th**, and grew at **+2.8%**, **+6.6%** and **+2.1%**, respectively. **Ryanair** continued to show strong growth at **+8.0%** and went up 1 position to **11th**. **Turkish Airlines** grew modestly at **3.0%** and remained at **14th**.

China Southern and **China Eastern** recorded the second and third strongest growth at **+10.4%** and **+9.8%**, respectively. The former remained at **8th** while the latter improved 1 position to **10th**. **Air China** grew solidly at **+6.2%** and maintained its **9th** position.

AUG 19

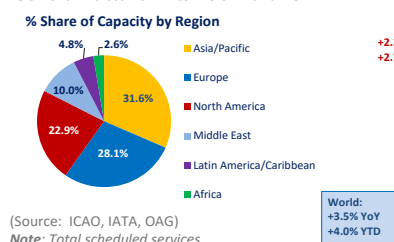|	RPK (billion)	YoY	% Share of World Total	Cumulative % Share
Delta	37.9	5.0%	4.9%	4.9%
American [1]	36.1	4.9%	4.6%	9.5%
United [1]	36.0	1.9%	4.6%	14.2%
Lufthansa Group [2]	29.2	2.8%	3.8%	17.9%
Emirates [1]	28.3	-0.9%	3.6%	21.6%
IAG [3]	28.3	6.6%	3.6%	25.2%
AF-KLM	28.0	2.1%	3.6%	28.8%
China Southern	27.1	10.4%	3.5%	32.3%
Air China	21.3	6.2%	2.7%	35.0%
China Eastern	20.3	9.8%	2.6%	37.7%
Ryanair	18.3	8.0%	2.4%	40.0%
Southwest [1]	17.8	-3.0%	2.3%	42.3%
Qatar Airways	17.0	11.8%	2.2%	44.5%
Turkish Airlines	15.2	3.0%	2.0%	46.5%
Air Canada [1]	15.1	-1.8%	1.9%	48.4%
Top 15 Total RPKs	**376 billion**	**4.3%**	**48.4%**	
World Total RPKs	**777 billion**	**3.8%**	**100.0%**	

(Source: ICAO, airlines' websites)

Note: Total scheduled and non-scheduled services

CAPACITY BY REGION *(ICAO Statistical Regions)*

AUG 2019: +3.5% YoY in terms of World ASK

% Share of Capacity by Region

- 4.8%
- 2.6%
- 10.0%
- 31.6% — Asia/Pacific
- 22.9% — Europe
- 28.1% — North America — Middle East — Latin America/Caribbean — Africa

North America: +2.3% YoY / +2.7% YTD
Europe: +3.3% YoY / +5.1% YTD
Middle East: +5.4% YoY / +5.0% YTD
Asia and Pacific: +1.1% YoY / +0.7% YTD
Africa: +6.1% YoY / +4.2% YTD
Latin America and the Caribbean: +0.8% YoY / +3.5% YTD
World: +3.5% YoY / +4.0% YTD

(Source: ICAO, IATA, OAG)

Note: Total scheduled services

Worldwide capacity expanded by **+3.5%** YoY in August 2019. All regions posted acceleration in capacity expansion, except for **Latin America/Caribbean**, which slowed down slightly and became the slowest growing region. **Africa** remained as the fastest expanding region in terms of capacity, followed by **Asia/Pacific**.

The YTD capacity expansion was at **+4.0%**, with **Europe** being the fastest growing region.

* Embarked Passengers ** Loaded and Unloaded Freight inTonnes   1. ICAO estimates   2. Lufthansa Airlines, Eurowings, SWISS, Austrian Airlines, Brussels Airlines, Sun Express, and Lufthansa Cargo   3. British Airways, Aer Lingus, Iberia, and Vueling

ACRONYMS: **ACI:** Airports Council International; **ASK:** Available Seat-Kilometres; **IATA:** International Air Transport Association;   **FTK:** Freight Tonne-Kilometres; **LF:** Passenger Load Factor; **OAG:** Official Airline Guide; **RPK:** Revenue Passenger-Kilometres; **UNWTO:** World Tourism Organization; **YoY:** Year-on-year; **YTD:** Year-to-date.

ECONOMIC DEVELOPMENT
SEP 2019: Air Transport Monthly Monitor

ICAO

World Results and Analyses for JUN 2019. Total scheduled services
(Domestic and international)

http://www.icao.int/sustainability/Pages/Air-Traffic-Monitor.aspx

Air Transport Bureau
E-mail: ecd@icao.int

GLOBAL KEY FIGURES	SEP 2019 *(versus SEP 2018)*	OUTLOOK* - OCT 2019 *(versus OCT 2018)*
	RPK ▲ +3.8% ASK ▲ +3.3% FTK ▼ -4.5% LF: 81.9% ▼ -3.8 pt	ASK ▲ +2.1% * Source OAG

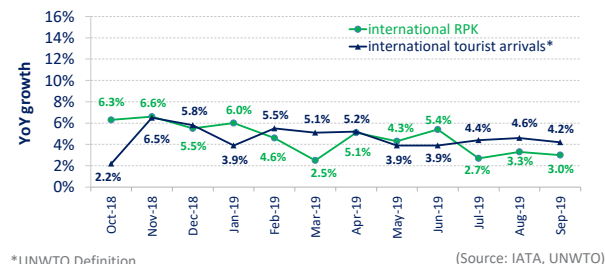## PASSENGER TRAFFIC

Revenue Passenger-Kilometres - RPK

World passenger traffic grew by +3.8% YoY in September 2019, same pace as the previous month. All regions posted a deceleration in growth, except for a solid pick up in North America which became the top performing region. Africa reported the most significant slowdown and experienced the slowest growth. For the first time this year, Japan became the strongest growing domestic market, partly due to the comparison with weak performance in the same period of last year, followed by China and the United States.

(Source: ICAO, IATA, OAG)
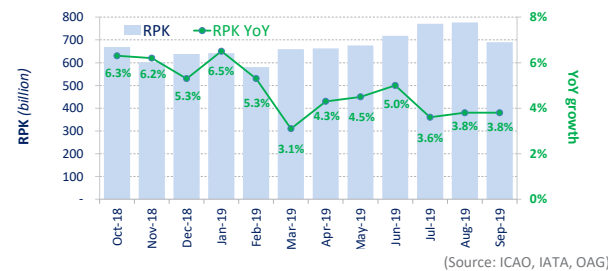
International Traffic vs. Tourist Arrivals

International passenger traffic grew by +3.0% YoY in September 2019, -0.3 percentage point lower than the growth in the previous month. All regions, except for North America and Asia/Pacific, decelerated in growth. Similar to total traffic trend, the most significant improvement and slowdown was experienced by North America and Africa, respectively.

The growth of international tourist arrivals* remained relatively stable.

*UNWTO Definition

(Source: IATA, UNWTO)

CAPACITY

Available Seat-Kilometres - ASK

Capacity worldwide increased by +3.3% YoY in September 2019, -0.2 percentage point lower than the growth in the previous month (+3.5%).

According to the airline schedules, capacity expansion is expected to slow down to +2.1% in October 2019.

(Source: ICAO, IATA, OAG)

Load Factor - LF

The passenger Load Factor reached 81.9% in September 2019, -3.8 percentage points lower than the previous month.

As traffic growth outpaced the capacity expansion, the September LF was +0.5 percentage point higher compared to the rate in the same period of 2018.
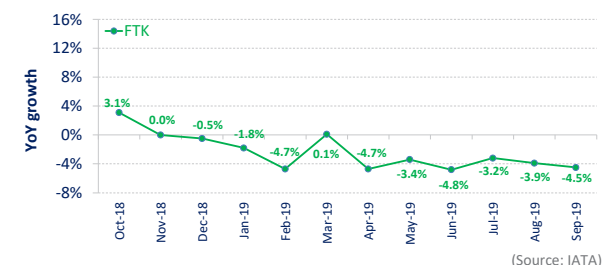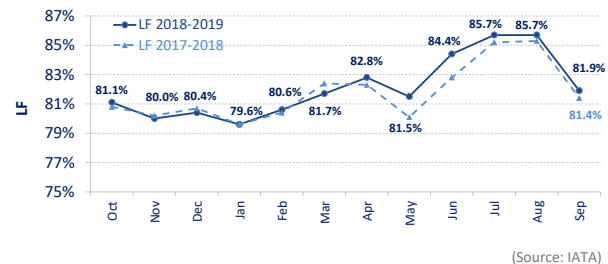
(Source: IATA)

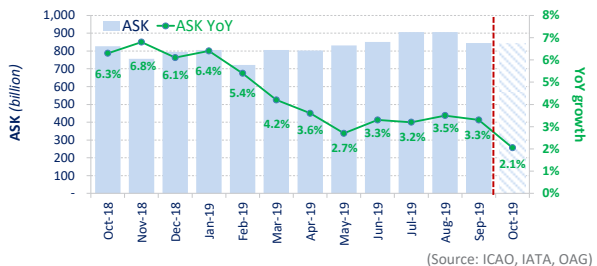## FREIGHT TRAFFIC

Freight Tonne-Kilometres - FTK

World freight traffic reported a decline of -4.5% YoY in September 2019, -0.6 percentage point lower than the growth in the previous month. Weakness in freight traffic was broad-based with performance of all regions deteriorated, impacted by the weak global trade attributed to the continued trade tension. Africa remained as the only region recording positive growth, however, the region experienced the most noticeable slowdown. For the fifth consecutive month, the Middle East was the weakest performing region, followed by Asia/Pacific and North America.

(Source: IATA)

ACRONYMS: **ACI**: Airports Council International; **ASK**: Available Seat-Kilometres; **IATA**: International Air Transport Association; **FTK**: Freight Tonne-Kilometres; **LF**: Passenger Load Factor; **OAG**: Official Airline Guide; **RPK**: Revenue Passenger-Kilometres; **UNWTO**: World Tourism Organization; **YoY**: Year-on-year; **YTD**: Year-to-date.

STATISTICS

ECONOMIC DEVELOPMENT
SEP 2019: Air Transport Monthly Monitor
World Results and Analyses for JUN 2019. Total scheduled services
(Domestic and international)

ICAO

TOP 15 AIRPORTS (Ranked by aircraft departures, passengers and volume of freight)

SEP 2019: +2.3%, +2.6%, and -4.9% YoY in terms of aircraft departures, passengers and freight for the Top 15

SEP 19

Airports (ranking by number of departures)	Departures	YoY	Airports (ranking by number of passengers)	Passengers*	YoY	Airports (ranking by tonnes of freight)	Freight**	YoY
Chicago IL, US (ORD)	39,171	2.2%	Atlanta GA, US (ATL)	4,366,630	4.2%	Hong Kong, CN (HKG)	397,000	-6.2%
Atlanta GA, US (ATL)	36,252	0.8%	Beijing, CN (PEK)	4,065,972	-0.9%	Memphis TN, US (MEM)	330,093	-11.5%
Dallas/Fort Worth TX, US (DFW)	30,654	14.7%	Tokyo, JP (HND)	3,653,116	1.1%	Shanghai, CN (PVG)	312,887	0.1%
Los Angeles CA, US (LAX)	27,769	-1.6%	Chicago IL, US (ORD)	3,540,735	0.1%	Anchorage AK, US (ANC)	228,188	0.5%
Denver CO, US (DEN)	27,438	9.9%	Los Angeles CA, US (LAX)	3,503,588	1.8%	Incheon, KR (ICN)	222,380	-10.0%
Beijing, CN (PEK)	24,784	0.5%	Dubai, AE (DXB)	3,499,599	-2.8%	Louisville KY, US (SDF)	208,368	4.8%
Frankfurt, DE (FRA)	23,357	1.7%	Paris, FR (CDG)	3,409,632	4.8%	Dubai, AE (DXB)	206,391	-6.7%
Amsterdam, NL (AMS)	22,879	-0.1%	London, GB (LHR)	3,388,709	-3.0%	Taipei, CN (TPE)	183,763	-6.7%
Paris, FR (CDG)	22,531	4.0%	Frankfurt, DE (FRA)	3,353,991	1.3%	Doha, QA (DOH)	180,382	-0.5%
Shanghai, CN (PVG)	21,168	2.2%	Amsterdam, NL (AMS)	3,246,741	1.4%	Tokyo, JP (NRT)	176,809	-8.4%
Guangzhou, CN (CAN)	20,470	5.2%	Istanbul, TR (IST)	3,124,385	0.0%	Singapore, SG (SIN)	170,200	-7.9%
Las Vegas NV, US (LAS)	20,273	3.0%	Shanghai, CN (PVG)	3,076,405	2.4%	Beijing, CN (PEK)	167,705	-8.8%
New Delhi, IN (DEL)	19,641	-0.9%	Dallas/Fort Worth TX, US (DFW)	3,073,647	15.5%	Frankfurt, DE (FRA)	164,719	-6.0%
London, GB (LHR)	19,572	-3.7%	Guangzhou, CN (CAN)	3,008,673	8.5%	Guangzhou, CN (CAN)	162,751	4.6%
Toronto ON, CA (YYZ)	19,228	-4.8%	Denver CO, US (DEN)	2,980,343	10.9%	Miami FL, US (MIA)	158,561	-4.0%

Note: Total scheduled and non-scheduled services

(Source: ACI)

In terms of **aircraft departures**, the Top 15 airports reported a growth of **+2.3%** YoY. Ten out of the Top 15 airports posted YoY increases. **Chicago** ranked **1st** with a modest growth of **+2.2%**. The strongest growth in operations was recorded by **Dallas/Fort Worth** at **+14.7%**, followed by **Denver** at **+9.9%**.

In terms of **passengers**, the Top 15 airports reported a growth of **+2.6%** YoY. Eleven out of the Top 15 airports posted YoY increases. **Atlanta** remained at **1st** with a growth of **+4.2%**, followed by **Beijing**, albeit with a decline. **Tokyo** ranked **3rd** with a marginal growth of **1.1%**. The most significant increase was recorded by **Dallas/Fort Worth** and **Denver** at **+15.5%** and **10.9%**, respectively.

In terms of **freight**, the Top 15 airports reported a decline of **-4.9%** YoY. Eleven out of the Top 15 airports posted declines. The most significant decrease was posted by **Memphis** at **-11.5%**, followed by **Incheon** (-10.0%) and **Beijing** (-8.8%). **Louisville** continued to record the highest growth at **+4.8%**, owing to the strengthening of its UPS hub position. This was followed by **Guangzhou** at **+4.6%**.

TOP 15 AIRLINE GROUPS (Ranked by RPK)

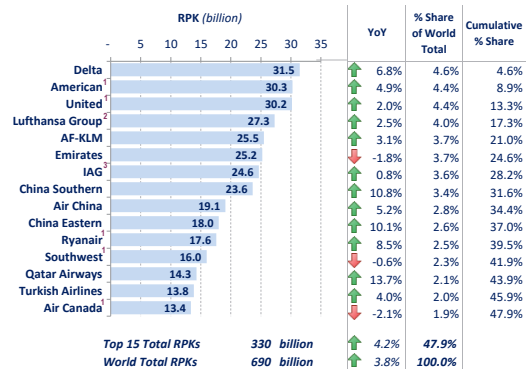**SEP 2019: +4.2% YoY in terms of RPK for the Top 15**

In terms of RPK, the Top 15 airline groups accounted for 47.9% of the world's total RPK in **September 2019 and grew by +4.2% YoY.** This growth was +0.4 percentage point higher than the world's average on scheduled services. Twelve out of the Top 15 airline groups posted YoY growth.

Delta remained at **1st** with a solid growth of **+6.8%**. Followed were **American** and **United**, growing at **+4.9%** and **+2.0%**, respectively. **Southwest** continued to post a decline but maintained its position at the **12th**. **Air Canada** remained **15th**, albeit with a negative growth of **-2.1%**.

With a decline of **-1.8%** YoY, **Emirates** dropped 1 position to **5th**. The other carrier in the region, **Qatar Airways**, once again recorded the fastest growth among the Top 15 with an increase of **+13.7%** and maintained its position on the **13th**.

Lufthansa retained its position of **4th** and grew at **+2.5%**. **AF-KLM** improved two positions to **5th** with a moderate growth of **+3.1%** while **IAG** went down one position to **7th**. **Ryanair** continued to show strong growth at **+8.5%** and retained its **11th** position. **Turkish Airlines** grew modestly at **+4.0%** and remained at **14th**.

China Southern and **China Eastern** recorded the second and third strongest growth at **+10.8%** and **+10.1%**, respectively, albeit remained at the same position of **8th** and **10th**. **Air China** grew modestly at **+5.2%** and maintained its **9th** position.

SEP 19

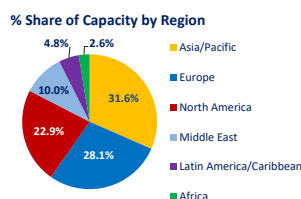| Airline	RPK (billion)	YoY	% Share of World Total	Cumulative % Share
Delta	31.5	6.8%	4.6%	4.6%
American[1]	30.3	4.9%	4.4%	8.9%
United[1]	30.2	2.0%	4.4%	13.3%
Lufthansa Group[2]	27.3	2.5%	4.0%	17.3%
AF-KLM	25.5	3.1%	3.7%	21.0%
Emirates	25.2	-1.8%	3.7%	24.6%
IAG[3]	24.6	0.8%	3.6%	28.2%
China Southern	23.6	10.8%	3.4%	31.6%
Air China	19.1	5.2%	2.8%	34.4%
China Eastern	18.0	10.1%	2.6%	37.0%
Ryanair	17.6	8.5%	2.5%	39.5%
Southwest[1]	16.0	-0.6%	2.3%	41.9%
Qatar Airways	14.3	13.7%	2.1%	43.9%
Turkish Airlines	13.8	4.0%	2.0%	45.9%
Air Canada[1]	13.4	-2.1%	1.9%	47.9%
Top 15 Total RPKs	**330 billion**	**4.2%**	**47.9%**	
World Total RPKs	**690 billion**	**3.8%**	**100.0%**	

(Source: ICAO, airlines' websites)

Note: Total scheduled and non-scheduled services

CAPACITY BY REGION *(ICAO Statistical Regions)*

SEP 2019: +3.3% YoY in terms of World ASK

% Share of Capacity by Region

- Asia/Pacific — 31.6%
- Europe — 28.1%
- North America — 22.9%
- Middle East — 10.0%
- Latin America/Caribbean — 4.8%
- Africa — 2.6%

North America: +2.7% YoY, +2.7% YTD
Europe: +2.3% YoY, +4.8% YTD
Middle East: +5.7% YoY, +5.0% YTD
Asia and Pacific: +0.3% YoY, +0.7% YTD
Latin America and the Caribbean: +1.3% YoY, +3.2% YTD
Africa: +3.4% YoY, +4.1% YTD
World: +3.3% YoY, +3.9% YTD

(Source: ICAO, IATA, OAG)
Note: Total scheduled services
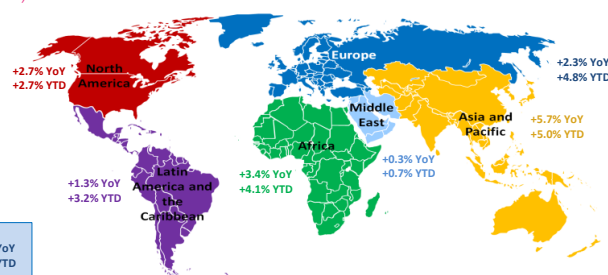
Worldwide capacity expanded by **+3.3%** YoY in September 2019. Three regions, Africa, Europe and the Middle East posted a slowdown in capacity expansion with the most signification deceleration observed in Africa. **Asia/Pacific** became the fastest expanding region albeit with a slight increase while **the Middle East** was the slowest growing region.

The YTD capacity expansion was at **+3.9%**, with Asia/Pacific being the top growing region followed by Europe.

* Embarked Passengers   ** Loaded and Unloaded Freight in Tonnes   1. ICAO estimates   2. Lufthansa Airlines, Eurowings, SWISS, Austrian Airlines, Brussels Airlines, Sun Express, and Lufthansa Cargo   3. British Airways, Aer Lingus, Iberia, and Vueling

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