



ICAO

ENVIRONMENT



ICAO Environmental Symposium 2019

DESTINATION GREEN: THE NEXT CHAPTER

ICAO Headquarters, Montréal, Canada | 14 - 16 MAY 2019

PROGRAMME AND EVENT DIRECTORY



CONTENTS

05. Conference
Agenda

15. Floor Plan
& Exhibitor Index

19. Sponsor and
Exhibitor Profiles

Get the latest schedule, speakers, sponsors and exhibitors information.

DOWNLOAD EVENTS @ ICAO



or access the web app from your computer
<http://bit.ly/env2019-webapp>

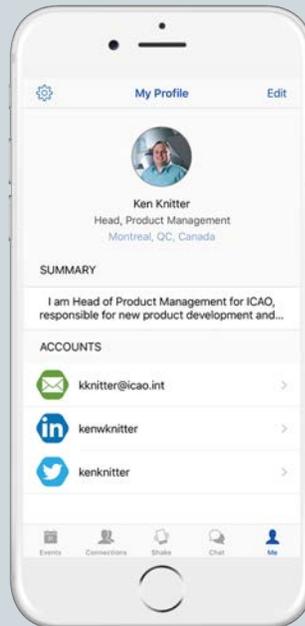


Get the most out of the app

Want to stay up-to-date on the latest announcements, post to social media, and interact with other attendees?

Register now at **Events @ ICAO** for a personalized app experience.

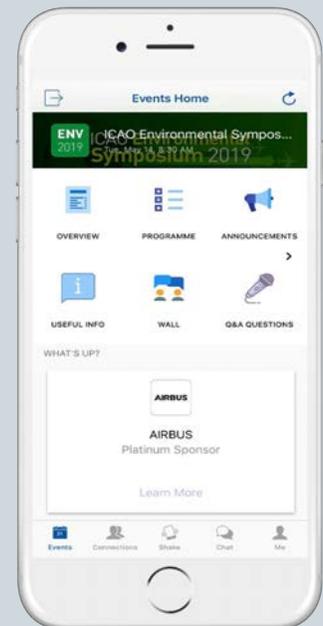
To register, simply enter your email address and create a password.



Personalize your experience

Once your official account is created, don't forget to complete your profile by adding your name, company, bio, and social media links.

To complete your profile, click **Edit Profile** and include your details.



Key app features

The **Events @ ICAO** app is your one stop shop for the latest event schedules, announcements, sponsors, and exhibitors information and more.

01.

CONFERENCE AGENDA

Day 1 - Tuesday, 14 May 2019

08:30 – 10:00 Registration

10:00 – 10:15 Welcome address

10:15 – 10:30 Keynote address

Ambassador Luis Alfonso de Alba, United Nations Secretary General Special Envoy for the 2019 Climate Change Summit

10:30 – 11:00 Session 1: Setting-the-scene

This session will aim to provide participants with a snapshot of the themes that will be discussed during the Symposium.

Speaker: Ms. Jane Hupe, Deputy Director Environment, ICAO

11:00 – 11:30

Coffee Break
sponsored by Bombardier

BOMBARDIER



11:30 – 12:30

Session 2: Two decades of Balanced Approach on Aircraft Noise: Impacts and Lessons Learned

Aircraft noise represents the first concern of communities and the most significant impediment to aviation growth. In 2001, the ICAO Assembly adopted the Balanced Approach to aircraft noise, thus laying down an internationally recognized framework for the management of aircraft noise at and around airports. This session will allow a number of case studies to be presented that will provide a better understanding of the impact of the Balanced Approach and will identify lessons learned on its implementation.

Moderator: Mr. Samuel Campbell Lucas, Australia's Representative on the ICAO Council

Speakers:

Mr. Tim Johnson, International Coalition for Sustainable Aviation (ICSA)

Mr. Michel Adam, Senior Manager, International Air Transport Association (IATA)

Mr. Michael Rossell, Deputy Director General, Airports Council International (ACI)

12:30 – 14:00 Lunch Break



Day 1 - Tuesday, 14 May 2019

14:00 – 15:00

Session 3: 50 years of Annex 16, Volume I: The Role of Technology in Reducing Aircraft Noise

The first edition of Annex 16, Volume I was developed in 1969. Since then, regular updates of Annex 16, Volume I fostered the development of noise reduction technologies that make today's aeroplanes 75 per cent quieter than in the 1960's. The session will examine whether aircraft and engine manufacturers have reached the limits of the technology envelope, or if more progress can be expected in the future.

Moderator: **Mr. Alok Shekhar**, India's Representative on the ICAO Council

Speakers:

Mr. Arnaud Bonnet, on behalf of the International Coordinating Council of Aerospace Industries Associations (ICCAIA)

Dr. Dimitri Mavris, Georgia Institute of Technology, The Independent Expert Integrated Review

Mr. Eli Dourado, Head of Global Policy and Communications, Boom Supersonic

Mr. Brian Cook, Engineering Group Head, Gulfstream

15:00 – 15:30

Coffee Break



15:30 – 16:45

Session 4 : Aircraft Noise and Annoyance - when non-acoustic factors drive out of the box thinking

Despite significant progress on the acoustic impact of aircraft, aircraft noise management at and around airports has remained the most significant impediment to aviation growth. This session will look at the dose-response relationship between aircraft noise exposure and annoyance and will elaborate on the role of non-acoustic factors underpinning annoyance to aircraft noise.

Moderator: **Ms. Annemarie Smith Floch**, Representative of Ireland on the ICAO Council

Speakers:

Prof. Paul Hooper, Manchester Metropolitan University

Mr. Jonathan Bagg, Senior Manager Public Affairs, NAVCANADA

Mr. Blake Cushnie, National Manager, Performance Based Operations Development NAVCANADA

Mr. Truls Gjestland, Senior Research Scientist SINTEF

16:45 – 17:00

Discussion and Wrap-Up

17:00 – 19:00

Reception

sponsored by Airbus

AIRBUS



09:00 – 10:00 **Session 5: Local Air Quality - The Role of ICAO Standards**

In 2004, ICAO adopted three environmental goals, including “limiting or reducing the impact of aviation emissions on local air quality”. ICAO has developed aircraft engine emission standards, which include Smoke Number, NO_x, CO, HC and non-volatile Particulate Matter (nvPM). During this session, engine and aircraft manufacturers will also be invited to share the impact of ICAO Standards on the technical options developed for retrofitting aircraft and on the design of new aircraft.

Moderator: **Ambassador Mitzi Gurgel Valente da Costa**, Brazil’s Representative on the ICAO Council

Speakers:

Dr. Neil Dickson, Chief Environmental Standards, ICAO

Mr. Theodore Rindlisbacher, Federal Office of Civil Aviation, Switzerland

Mr. Daniel Carnelly, Director, Aircraft Environmental Marketing, Airbus SAS

10:00 – 10:30 **Coffee Break**

sponsored by
Airlines for America



Airlines for America
We Connect the World



10:30 – 11:30 **Session 6: The ICAO Basket of Measures on CO₂ Emissions Mitigation – Focus on Technology**

The 37th Session of the ICAO Assembly adopted two aspirational goals of 2 per cent annual fuel efficiency improvement and carbon-neutral growth from 2020. It also defined a basket of mitigation measures that States and aviation stakeholders could implement to collectively progress towards the goals. This session will invite relevant stakeholders to present the latest progress on aircraft technology.

Moderator: **Dr. Neil Dickson**, Chief Environmental Standards, ICAO

Speakers:

Mr. Rüdiger Thomas, Engine Performance Senior Expert, Airbus

Mr. Amory Levins, co-founder and Chief Scientist, the Rocky Mountain Institute

Mr. Sean Newsum, Director of Environmental Strategy, Boeing

Mr. Arnaud Bonnet, Senior Engineer, engine performance, Embraer

Day 2 - Wednesday, 15 May 2019

11:30 – 12:00 **Session 7: The ICAO Basket of Measures on CO₂ Emissions mitigation – Focus on Operations**

This session will invite relevant stakeholders to present the latest progress on operational improvements, as one of the elements of the ICAO Basket of Measures.

Moderator: **Dr. Neil Dickson**, Chief Environmental Standards, ICAO

Speakers:

Mr. David Brain, Environment and Operations, EUROCONTROL

Mr. Ian Jopson, Head of Environmental and Community Affairs, NATS

12:00 – 13:30 **Lunch Break**



13:30 – 15:00 **Session 8: The ICAO Basket of Measures on CO₂ Emissions mitigation – Focus on Sustainable Aviation Fuels**

This session will invite relevant stakeholders to present the latest progress on sustainable aviation fuels. It will also provide information on the outcome of the First ICAO Stocktaking Seminar Toward the 2050 Vision for Sustainable Aviation Fuels (30 April to 1 May 2019 in Montreal, Canada).

Moderator: **Mr. Dionisio Mendez**, Mexico's Representative on the ICAO Council

Speakers:

Ms. Jane Hupe, Deputy Director Environment, ICAO

Mr. Cesar Velarde, co-Rapporteur of the Aviation Fuel Task Force (ICAO CAEP)

Mr. Glenn Johnston, Executive Director of Regulatory Affairs at Agrisoma Biosciences Inc. and Chair Regulatory Committee of the Advanced Biofuels Association (ABFA)

Mr. Steven Le Moing, Sustainable Alternative Fuels Manager, Airbus Environmental Affairs

Mr. Jean-Christophe Monfort, Senior Energy Life Cycle Emissions Analyst, Aramco Services

15:00 – 15:30 **Coffee Break**

sponsored by
United Airlines



15:30 – 17:00 **Session 9: The ICAO Basket of Measures on CO₂ Emissions mitigation – Focus on CORSIA**

This session will invite relevant stakeholders to present the latest progress on CORSIA, including the outcome of the ICAO Regional Workshops on CORSIA and the latest developments on ACT CORSIA.

Moderator: **Ambassador Philippe Bertoux**, France's Representative on the ICAO Council

Speakers:

Ms. Jane Hupe, Deputy Director Environment, ICAO

Mr. Michael Gill, Executive Director, ATAG

Mr. Gawie Bestbier, Executive Aviation Infrastructure, South Africa Civil Aviation Authority

Eng. Majed Obaid Al Mujaini, Chief Officer – Environment, General Civil Aviation Authority, United Arab Emirates

09:00 – 10:45

Session 10: Green and Resilient Airports

In May 2019, ICAO organized a Seminar on Green Airports in Lima, Peru. The objective of this Seminar was to identify the various components of a “Green Airport” and to take stock of the latest practices on each of these aspects. This session is aimed at sharing the key conclusions from the Seminar on Green Airports, including on climate change adaptation.

Speakers:

Ms. Rachel Burbidge, Environment Policy Officer, EUROCONTROL

Ms. Ülkü Özeren, IGA's Director of Environment & Sustainability

Ms. Juliana Scavuzzi, Senior Manager Environment, Airports Council International (ACI)

Mr. Matthew Gorman, Director Sustainability and Environment, London-Heathrow Airport

10:45 – 11:15

Coffee Break

sponsored by
Onyx Solar



11:15 – 12:00

Session 11: International Aviation in a Circular Economy

The principles of a “Circular Economy” emerged in the 1970’s, and have since been integrated into a number of environmental sustainability policies, such as the waste management policy of “reduce, re-use and recycle”; the use of sustainable aviation fuels processed from waste products; the consideration of energy efficiency and water usage during manufacturing processes. In the past few years, several aviation stakeholders have adhered to the principles of a circular economy and designed comprehensive implementation strategies. The objective of this session will be to raise awareness on the roots of the “Circular Economy”, to look at its main principles and applications and to understand how they translate to the international aviation sector.

Moderator: **Ambassador Martin Vidal**, Uruguay’s Representative on the ICAO Council

Speakers:

Ms. Michelle Samson, Corporate Responsibility Advisor, Amsterdam-Schiphol Airport

Mr. Philippe Fonta, Founder and CEO SCRUM-consult

Day 3 - Thursday, 16 May 2019

12:00 – 14:00 Lunch Break



14:00 – 15:00 **Session 12: ICAO Capacity-building and assistance activities on environmental protection – a success story**

The ICAO State Action Plans are an ICAO initiative under the context of No Country Left Behind. This session will highlight the benefits of developing an action plan for a State and its stakeholders, showcase successful cooperation between ICAO Member States as part of the Buddy Programme and raise awareness on the updates to ICAO Doc 9988. It will also present the deliverables of the capacity-building activities deployed as part of the regular programme, and the implementation of two capacity-building and assistance projects, with funding from the European Union and from the Global Environmental Facility (in cooperation with the United Nations Development Programme), respectively.

Moderator: **Mr. Shinji Matsui**, Japan's Representative on the ICAO Council

Speakers:

Dr. Neil Dickson, Chief Environmental Standards, ICAO

Mr. Eduardo Caldera Petit, Programme coordinator, ICAO-European Union project

Mr. Mazarin Mintsa, Director Safety, Quality and Environment, Aeroports du Cameroun

Ms. Dorsa Sabet-Rasekh, Civil Aviation Authority, Panama

15:00 – 15:30 Coffee Break



15:30 – 16:30

Session 13: Three years to prepare for the next 30

This session will summarize the work accomplished by ICAO in the area of environmental protection and set out by the successive Assembly Resolutions and will invite stakeholders to present their views on the challenges that the international aviation sectors will have to face in the next decades in the area of environmental protection.

Moderator: **Ms. Jane Hupe**, Deputy Director Environment, ICAO

Speakers:

Mr. Michael Gill, Executive Director, ATAG

Mr. Michael Rossell, Deputy Director General, ACI

Mr. Tim Johnson, International Coalition on Sustainable Aviation (ICSA)

Mr. Nico Voorbach, Director, ICAO and Industry Affairs, CANSO

Ms. Leslie Riegle, Assistant Vice President, Civil Aviation, Aerospace Industries Association, on behalf of ICCAIA

16:30 – 17:00

Closing Remarks

END

THE FUTURE. NOW UNDER CONSTRUCTION.



FLY
WE MAKE IT

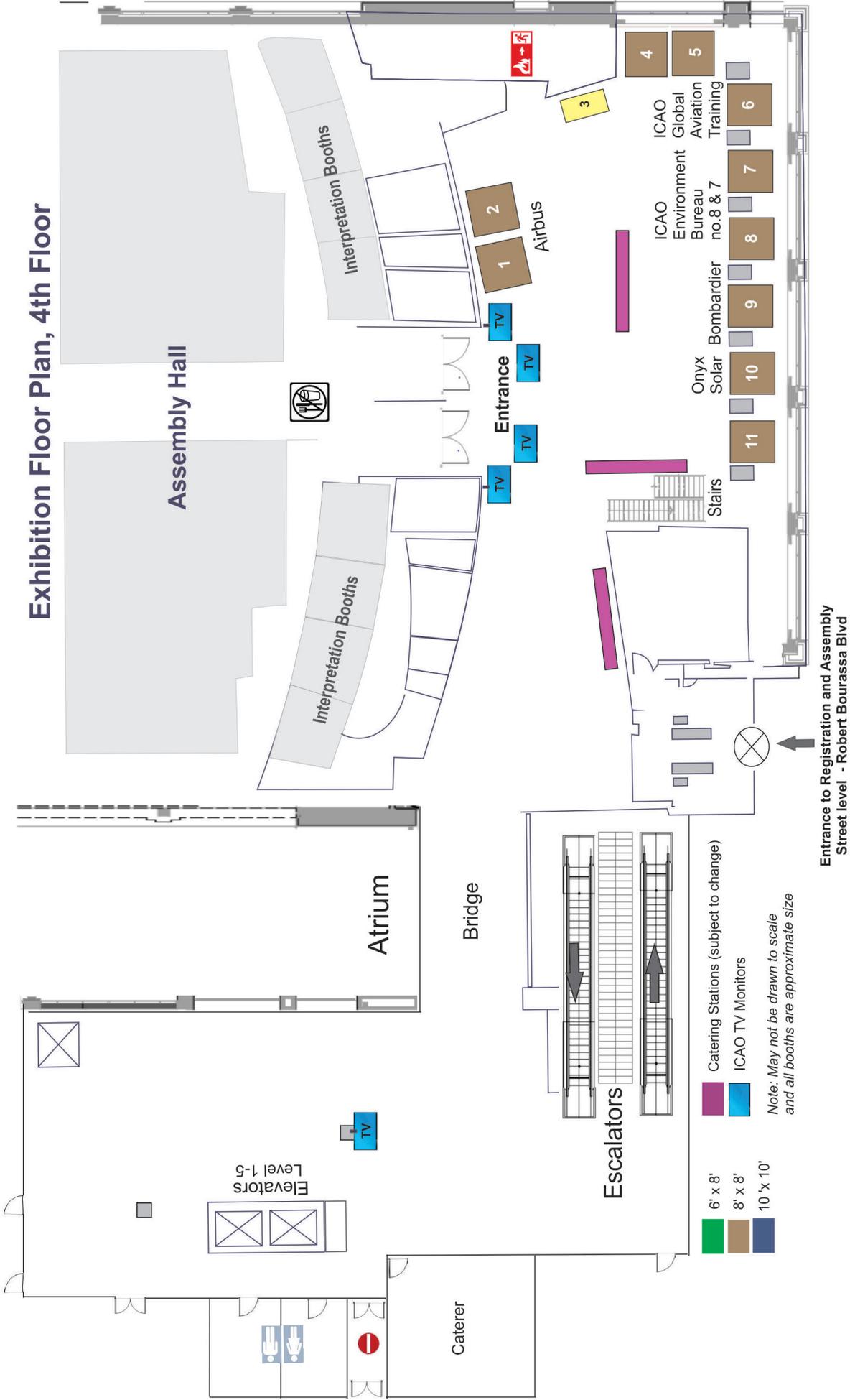
Whether it's integrating cutting-edge technology to reduce our environmental impact, driving innovation to improve society or ensuring we operate ethically throughout our entire supply chain, Airbus is committed to developing a sustainable future for our business, our stakeholders and the planet. That's why we embrace the UN's Sustainable Development Goals. It's not only what we make; it's what we're made of.

Sustainability. We make it fly.

02.

**FLOOR PLAN
& EXHIBITOR
INDEX**

Exhibition Floor Plan, 4th Floor



Assembly Hall

Interpretation Booths

Interpretation Booths

Atrium

Caterer

Bridge

Escalators

Entrance

Airbus

Catering Stations (subject to change)

ICAO TV Monitors

Note: May not be drawn to scale
and all booths are approximate size

Entrance to Registration and Assembly
Street level - Robert Bourassa Blvd

- 6' x 8'
- 8' x 8'
- 10' x 10'

- 4 ICAO
- 5 ICAO
- 6 Global Aviation Training
- 7 Environment Bureau no.8 & 7
- 8 Bombardier
- 9 Onyx Solar
- 10 Bombardier
- 11

Stairs



Exhibitor Index

Exhibitor	Booth	Day 1	Day 2	Day 3
Airbus	01 & 02	Yes	-	-
Bombardier	09	Yes	-	-
Onyx Solar	10	Yes	Yes	Yes

A stylized globe is centered in the lower half of the image, overlaid with a white dashed-line network pattern. The globe is semi-transparent, showing the clouds and sky from the background image.

Leading Sustainable Mobility

BOMBARDIER

03.

**SPONSOR AND
EXHIBITOR
PROFILES**

AIRBUS



Leading the way in environmental performance



At Airbus we are improving our environmental performance at every stage in the aircraft lifecycle; from design to manufacturing, in operations and recycling. And it shows.

AIRBUS

Airbus is a global pioneer in the aerospace industry, operating in the commercial aircraft, helicopters, defence and space sectors. The Company is a leader in designing, manufacturing and delivering aerospace products, services and solutions to customers on a worldwide scale.

As the largest aeronautics and space company in Europe and a worldwide leader, Airbus is at the forefront of the aviation industry, building the most innovative commercial aircraft and consistently capturing about half of all commercial airliner orders. Thanks to its deep understanding of changing market needs, customer focus and technological innovation, Airbus helps airlines grow and people connect.

“Aviation is at the early stages of an extraordinary technological revolution. For the next decade and beyond, innovation will be on a scale not seen in the history of aviation. Electrification, artificial intelligence, advanced connectivity, digital technology and quantum computing will all combine in exciting ways to improve our environmental performance which is at the core of our activities.

At Airbus we want to work with ICAO and all its stakeholders to anticipate these changes and make them an opportunity for a new prosperous age of aviation providing new flight experiences and connecting more people in a sustainable way.

Realising the dream of cleaner flight will not be easy but improving the environmental performance of commercial aviation will be critical to retain public confidence in the air transport sector. With the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) we now have a global path towards achieving a carbon neutral growth for aviation in the next 15 years.

The development and deployment of sustainable aviation fuels is also crucial, therefore Airbus is supporting the certification of new pathways and is actively promoting their use in operations. Together with the industry, we at Airbus, have already signed up to halving CO₂ emissions by 2050 versus 2005 levels, pressing ahead with research and development into a new generation of cleaner technology to cut emissions. Our final goal must be zero emission flying.

I trust that working together we'll be able to lay the foundations of a safer and cleaner aviation industry, allowing the next generations to keep flying with total respect of our planet.” Guillaume Faury

 **Airbus**
www.airbus.com

 **Danielle Patton**
danielle.patton@airbus.com

BOMBARDIER



Recognized as a leader in environmental life cycle analysis, Bombardier is also actively engaging in the development, commercialization and adoption of Sustainable Alternative Jet Fuel (SAJF). Together with its industry partners, Bombardier spearheaded the development and publication of the Business Aviation Guide to SAJF, and is currently championing pilot projects to increase SAJF availability.

 **Bombardier**
www.bombardier.com

 **Mr. Leo Knaapen**
leo.knaapen@aero.bombardier.com



Airlines for America® (A4A), the principal trade and service organization of the U.S. airline industry, vigorously advocates for the industry as a model of safety, customer service and environmental responsibility and as the indispensable network that drives our nation's economy and global competitiveness. While representing only 2 percent of the nation's greenhouse gas emissions, the U.S. airlines are committed to continuing to improve fuel efficiency and reduce emissions through technology, operations, energy and infrastructure advances coupled with ICAO-agreed policies. We are vigorously pursuing the deployment of sustainable alternative aviation fuels through the Commercial Aviation Alternative Fuels Initiative® and other initiatives.

 **Airlines for America (A4A)**
www.airlines.org

 **Ms. Nancy Young**
nyoung@airlines.org



Onyx Solar is the global leader in solar PV glass for buildings. This game-changer material not only generates electricity from the sun, but also provide thermal and acoustic insulation, natural lighting, and UV/IR filters in innovative, state-of-the-art designs. It has been awarded as the Most Innovative Glass Product and Greatest Technology of the world.

Among the solar solutions that Onyx Solar offers, the most popular include photovoltaic skylights, curtain walls, floors and other façade systems.

With over 180 projects in the 5 continents and over 70 international awards, it has been recognized as the Global Leader Manufacturer of Photovoltaic Glass for Buildings, and it is the most awarded photovoltaic company in the globe.

 **Onyx Solar**
www.onyx-solar.co

 **Sergio Martín**
smartin@onyxsolar.com



United Airlines and United Express operate approximately 4,900 flights a day to 355 airports across five continents. United Airlines' award-winning Eco-Skies program represents the company's commitment to the environment and the actions taken every day to create a sustainable future. In 2017, Air Transport World magazine named United the Eco-Airline of the Year for the second time since the airline launched the Eco-Skies program. Last year, United Airlines ranked No. 1 among global carriers in Newsweek's Global 500 Green Rankings, one of the most recognized environmental performance assessments of the world's largest publicly traded companies.

 **United Airlines**
www.united.com/ecoskies

 **Ms. Maria Race**
maria.race@united.com



ICAO

UNITING AVIATION

SAVE THE DATE

2019 Events on the horizon

Updated on 26 February 2019

ICAO TRIP Regional Seminar	Cotonou, Benin	12 – 14 February 2019
EUR/NAT-DGCA/2019	Paris, France	19 – 20 March 2019
ICAO/ACI Symposium on Implementation of the New Global Reporting Format for Runway Surface Condition (GRF2019)	Montréal, ICAO HQ	26 – 28 March 2019
UNWTO/ICAO Ministerial Conference on Tourism and Air Transport in Africa	Santa Maria, Sal Island, Cabo Verde	27 – 29 March 2019
Seminar on Aerodrome Certification and Surveillance	Brasília, Brazil	22 – 26 April 2019
ICAO Stocktaking Seminar toward the 2050 Vision for Sustainable Aviation Fuels	Montréal, Canada	30 April – 1 May 2019
ICAO Seminar on Green Airports	Lima, Peru	8 – 9 May 2019
Fourth ICAO Air Transport Symposium (IATS/4)	Paradise City, Incheon, Korea	8 – 10 May 2019
Environmental Symposium	Montréal, ICAO HQ	14 – 16 May 2019
ICAO EURNAT Aviation Security Group (ENAVSEC)	Paris, France (TBC)	4 – 6 June 2019
6Th Meeting of the air navigation and FLS Directors	Lima, Peru	24 – 26 June 2019
Fifteenth Symposium and Exhibition on the ICAO Traveller Identification Programme (TRIP)	Montréal, ICAO HQ	25 – 28 June 2019
ICAO Global Aviation Cooperation Symposium	Thailand	22 – 24 July 2019
56th APAC DGCA Conference	Kathmandu, Nepal	19 – 23 August 2019
ICAO Global Aviation Security Symposium (AVSEC2019)	Montréal, ICAO HQ	18 – 20 September 2019
Innovation Fair	Montréal, ICAO HQ	22 – 23 September 2019
Fifth ICAO World Aviation Forum (IWAF 2019)	Montréal, ICAO HQ	22 – 23 September 2019
40th Session of the Assembly	Montréal, ICAO HQ	24 September - 4 October 2019
Cyber Security & Resilience Seminar	Cairo, Egypt	8 – 10 October 2019
APANPIRG30 – 30th Asia/Pacific Air Navigation Planning and Implementation Group	Bangkok, Thailand	4 – 6 November 2019
RASG-APAC/9 – 9th Regional Aviation Safety Group Meeting – Asia/Pacific Region	Bangkok, Thailand	7 – 8 November 2019
Third UAS DRONE ENABLE Symposium (UAS2019)	Montréal, ICAO HQ	12 – 14 November 2019
Tenth ICAO ATFM Global Symposium (ATFMS/10)	Region (TBD)	Q4
Global Aviation Training and TRAINAIR PLUS Symposium	Region (TBD)	2019

For a full list of upcoming events visit: icao.int/meetings

* All event dates are subject to change

For more information regarding sponsorships and exhibitions, please contact mcr@icao.int



| ICAO