



Setting the Scene – The Shape of the Future



Mr. Bertrand Piccard, Initiator & Chairman, Solar Impulse

Psychiatrist, aeronaut and internationally renowned lecturer, president of the humanitarian foundation "Winds of Hope" and goodwill ambassador for the United Nations, he aspires to combine his family scientific heritage with his commitment to exploring the great adventure of life.

Pioneer of hanggliding and microlight flying in Europe, European hang-glider acrobatics champion in 1985 and winner of the first transatlantic balloon race (Chrysler Challenge 1992), Bertrand Piccard is also the initiator of the Breitling Orbiter project. His success as pilot in command of the first non-stop round the world balloon flight in 1999 has pushed him to the front of the stage as a "savanturier" (scholar-adventurer, scientist-adventurer).

Following this success, he was decorated with the Legion of Honour, the Olympic Order and the highest distinctions of the International Aeronautical Federation, the National Geographic Society and the Explorer's Club. Honorary professor and honorary doctor in science and letters, he also received the Grand Prix of l'Académie des Sciences Morales et Politiques.

Thanks to his experiences, he officially launches in 2003 the Solar Impulse project, to take on a new challenge: flying round the world in an airplane propelled uniquely by solar energy, without fuel or pollution, in order to promote the immense potential of renewable energies and their new technologies.



Ms. Jane HUPE, Deputy Director ENV/ATB, ICAO

Jane Hupe is Deputy Director, Environment, in ICAO's Air Transport Bureau, and the Secretary of the Committee on Aviation Environmental Protection (CAEP). Ms. Hupe is responsible for the environmental programme of ICAO and has been at the forefront of ICAO's efforts to define and promote policies and standards for an environmentally sustainable aviation. Her responsibilities entail directing ICAO environmental activities, including managing the CAEP, advising the ICAO Council on matters related to aviation and the environment, including the establishment of aviation environmental Standards, guidance and policies, and coordinating all activities in the field of aviation and the environment with other International Organizations. Jane contributed to various IPCC Reports on aviation related measures, including the 2007 IPCC Fourth Assessment Report and was the lead author of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. For her work, Jane received a certificate acknowledging her contribution to the award of the 2007 Nobel Peace Prize to the IPCC. Prior to joining

ICAO, Jane served as advisor on environmental matters to the Brazilian Aviation Authorities for 15 years. Jane has a Master's degree in Aviation from the École Nationale de L' Aviation Civile (ENAC), Toulouse, France, and many other post-graduate degrees, including in environmental auditing.



SESSION I - Current and Future Aircraft Technologies



MODERATOR: Mr. Rolf Monning, Member of the ICAO Air Navigation Commission, Alternate German Representative on the ICAO Council

Since 2009 Rolf is serving as a member of the Air Navigation Commission. Since 2014 he is the Chairperson of ANC's standing working group on Procedural Matters and a member of the ANC Planning Team. He chaired several ANC-Subgroups, also referred to as "Commission Groups". He was nominated as the first Chairperson of the "Commission Group", which was inaugurated to facilitate the timely publication of ICAO's latest Annex 19 "Safety Management". Rolf was member of numerous ICAO Working Groups and Task Forces.

Before becoming a member of the ANC, Rolf, who holds a master's degree in aerospace engineering and a Private Pilot License, has successfully been promoting aviation safety for over 25 years, working on a national and international level. He started his career as a technical officer in the German Airforce for

twelve years, involved in on-site maintenance activities, development of programmes for maintenance and integration of new systems for several types of transport aircraft of the German Armed Forces. Subsequently Rolf spent 13 years at the German Federal Aviation Office (LBA), working in the areas of approval, maintenance and flight operations of air operators and maintenance organizations. He is an approved Quality System Auditor with extensive practical experience, led a number of significant LBA projects and was, amongst others, responsible for

- European Flight Operational Standardization as National Coordinator and leader of numerous audits to European Civil Aviation Authorities,
- development of internal and external procedures as focal point for the implementation of Safety Management and Quality Systems in German operators,
- coordination and standardisation of all flight operation surveillance activities for German operators,
- auditing / checking of national and international air operators and maintenance organisations, and
- coordination of maintenance supervision activities of all technical inspectors working in the LBA regional offices.



Dr. Edgar G. Waggoner, Director of the Integrated Systems Research Program

As director of the Integrated Systems Research Program Office, Ed Waggoner is responsible for the overall planning, management and evaluation of the directorate's efforts to conduct integrated, system-level research on promising vehicle and operational technologies in a relevant environment that meet energy, environmental and mobility objectives. In addition, he supports the associate administrator in a broad range of mission directorate activities, including strategic and program planning; budget development; program review and evaluation; and external coordination.

Previously he was on assignment to the Joint Planning and Development Office in Washington, DC, where he served as director of the Interagency Architecture and Engineering Division responsible for technical leadership in the development of the Next Generation Air Transportation System (NextGen) Enterprise Architecture, Concept of Operations, and Integrated Work Plan. While on this assignment, he served as a co-author of the Mobility chapter for the National Aeronautics R&D Plan.

Waggoner began his NASA career in 1982 as a researcher in the theoretical aerodynamics discipline at NASA's Langley Research Center. He eventually held management positions in Langley's transonic and subsonic aerodynamics branches responsible for planning and supervision of applied computational and experimental research directed at developing aerodynamics technology for advanced civil and military vehicles.

Prior to NASA, Waggoner worked as a researcher and project engineer with Vought Corporation in Dallas, Texas, where he worked on advanced wind tunnel testing techniques and performed foundational work in the emerging field of computational fluid dynamics. He has been awarded several NASA Group Achievement Awards and NASA Special Act or Service Awards and has authored or coauthored 44 NASA technical papers, journal articles and conference publications on computational and experimental aerodynamics, and advanced airspace systems concepts. He is an associate fellow of the American Institute of Aeronautics and Astronautics.

Waggoner received a bachelor's degree in aerospace engineering from Auburn University, a master's degree in mechanical engineering from Southern Methodist University, and master's and doctoral degrees in engineering management from George Washington University.



SESSION I - Current and Future Aircraft Technologies



Ms. Sarah Walter, Rolls-Royce, International coordinating council of Aerospace Industries Associations (ICCAIA)

Sarah Walter is currently acting as Head of New Projects for Rolls-Royce Civil Small and Medium Engines business unit, working direct with Bombardier Aerospace on developing new projects and executing research and technology on aerospace technology which will deliver higher performance and greener products. Sarah's background is in Mechanical Engineering, beginning her career specializing in Robust Design within Combustion Systems and most recently acting as Assistant Chief Engineer for the Trent 60, a Gas Turbine power plant product within the Energy Division of Rolls-Royce. Sarah has been with Rolls-Royce for over ten years and worked across multiple business sectors and different sites around the world.



Mr. Rainer Von Wrede – Head of Environment – Engineering and R&T

Since he joined Airbus in 1990, Rainer has gained a sound experience in the vast field of "environment", dealing successively with all its aspects and facets, giving him the quality of expert "Aviation and Environment".

Rainer is today leading all environmental activities in Airbus Engineering, with an additional specific focus on strategic research.

Rainer also represents Airbus in international rulemaking fora and chaired the Environment Committee of ASD (The European Association of Aeronautics, Space and Defence Industries) for many years. He is closely involved in EU research, having chaired the ACARE Environment Committee, and being advisory board member of several R&T programs and Thematic Networks.

He is a graduate engineer in Aeronautics from the RWTH Aachen in Germany, and in Applied Fluid Dynamics from the Von Karman Institute in Brussels, Belgium. He holds a PHD in Mechanics/Acoustics from the Ecole Nationale Supérieure de l'Aéronautique et de l'Espace (Sup-Aéro) in Toulouse, France.



Mr. David Akiyama, ecoDemonstrator Program Manager, Environmental Performance, Boeing Commercial Airplanes

David Akiyama is the ecoDemonstrator Program Manager. David graduated from Stanford University with a BS in Mechanical Engineering and a MS in Aeronautics and Astronautics. He has held positions in aerodynamics, propulsion, fuels research, and software development as well as in new airplane product development where he had the privilege of managing the development of the 787's aerodynamic design.



SESSION I - Current and Future Aircraft Technologies



Mr. Wes Lord, Pratt & Whitney

Wesley K. Lord has 36 years' experience at Pratt & Whitney. Current position is Technical Fellow for System Architecture Functional Synthesis. He has worked in the areas of gas turbine engine secondary flow systems aerothermal design, turbine aerodynamics, turbine heat transfer, inlet/nozzle/nacelle aerodynamics, fan aerodynamics, computational fluid dynamics, acoustics, and aero component system integration. He is inventor or co-inventor on 16 patents. He has a BS and MS in Mechanical Engineering from Rensselaer Polytechnic Institute (1973) and ScD in Mechanical Engineering from Massachusetts Institute of Technology (1983).



Mr. Fassi Kafyeke, Ing., Ph.D. Director, Advanced Design and Strategic Technology Bombardier Aerospace

Fassi Kafyeke joined Bombardier Aerospace in 1982 as a Computational Fluid Dynamics and Aerodynamics engineer and was named Manager, Advanced Aerodynamics in 1996. As Chief Aerodynamicist, he was responsible for both aerodynamic design and development wind tunnel testing for several Bombardier aircraft including the CRJ700/900/1000 NextGen family of regional airliners, the all-new CSeries commercial aircraft, and the Challenger 300 and Global Express business jets.

In 2007, he was appointed Director, Strategic Technology, with responsibility for engineering research and technology across Bombardier Aerospace. In 2014, Dr. Kafyeke was named to his current post as Director of Advanced Design and Strategic Technology, assuming responsibility for product

innovation, technology innovation, engineering competence development and knowledge management.

He is actively involved in numerous industry agencies including the Aerospace Industries Association of Canada (AIAC) and the Society of Automotive Engineers (SAE). He is also a Board Member of Canada's Green Aviation Research and Development Network (GARDN) and Chairman of the Board of the SA2GE consortium (Smart Affordable Green Efficient) in Québec, Canada, that operates demonstration projects for green aircraft technologies.

Dr. Kafyeke graduated as an electromechanical engineer (Aerospace) from Belgium's Université de Liège in 1980. In 1981, he obtained a Master's degree in Air Transport Engineering (Aircraft Operations and Maintenance) from the Cranfield Institute of Technology, England, and completed a Doctorate program in Mechanical Engineering (Aerodynamics) at École Polytechnique de Montréal in 1994.

He is a Fellow of the Canadian Aeronautics and Space Institute (CASI), an Associate Fellow of the American Institute of Aeronautics and Astronautics (AIAA), and a member of the Royal Aeronautical Society (RAeS).

Dr. Kafyeke is based at Bombardier Aerospace headquarters in Montreal, Canada.



Mr. Nelson Salgado, Vice President of Institutional Relations and Sustainability, Embraer SA

Born in 1960, Mr. Salgado graduated in engineering and earned a master's degree from the University of São Paulo. In 1997 he was awarded a PhD Degree in computational Mechanics by the Wessex Institute of Technology, England and later became a visiting professor at the aeronautical engineering division of ITA, Instituto Tecnológico de Aeronáutica. In 2002 he completed a MBA at Fundação Getulio Vargas, São Paulo. Mr. Salgado has been with Embraer for 27 years. Having started at the engineering department, he held executive positions on corporate functions such as Strategic Planning, Economical and Financial Planning and Mergers and Acquisitions. From early 2012 to January 2014 he was the CEO of Visiona Tecnologia Espacial, a joint venture company formed by Embraer and Telebras. In February 2014, Mr. Salgado rejoined Embraer S.A. as Vice President of Institutional Relations and Sustainability.



SESSION I - Current and Future Aircraft Technologies



Mr. Claudio Leonardi, Clip-Air Project, EPFL

Project Manager of Clip-Air at EPFL (Ecole Polytechnique Fédérale de Lausanne). Clip-Air is a new concept in air transport developed at EPFL since 2008.

He is also responsible for coordination and development in the fields covered by the Clip-Air project: transportation, mechanics, structure, architecture, sociology, and visualization. Claudio Leonardi has already been involved in many other projects regarding the aeronautic domain.



Mr. Daniel Wehner, Fraunhofer IBP

Daniel Wehner (M.Sc.) is a chemical and environmental engineer working as a researcher and project manager at the Department Life Cycle Engineering (GaBi) of the Fraunhofer IBP. His main fields of research are eco-design and life cycle assessment in the aviation and automotive sector with special focus on resource efficiency and environmental performance of lightweight solutions. Within the European aeronautical research programme CLEAN SKY he and his colleagues developed the aircraft eco DESIGN® Software Tool ENDAMI.

Moreover he coordinated the activities of the CLEAN SKY Material Board where he developed aviation specific material life cycle inventory datasets as basis for assessing the environmental footprint of aviation technologies and products. Besides this he is the leader of the task force on life cycle analysis of the lightweight initiative of the federal state of Baden-Württemberg in Germany.



SESSION II - Aircraft End-of-Life: Scrapping and Recycling



MODERATOR: Amb. Moumouni Diegumde, Representative of Burkina Faso on the Council of ICAO

At University level, he studied for three years Mathematics, Physics and Technology at the National Universities of both Côte d'Ivoire and ex Upper Volta, now Burkina Faso. Thereafter, he moved to the United States of America (USA), where he permanently remained for almost 14 years. While in the US, he obtained with highest honours (summa cum laude) a Bachelor of Science (BS) Degree in Airport Management from the Vaughn College of Aeronautics & Technology of LaGuardia, New York, and a Masters of Art (MA) with thesis in International Relations from the City College, The City University of New York.

At the Professional level, he started with the aviation industry in 1984 as a space controller at Air Afrique and was successively promoted inspector, assistant manager, and then manager of sales, public relations and airport operations. His tenure in the civil aviation industry includes working also in the US, precisely in insurance and buy & sale of aircraft.

In January of 2004 he was offered a position in the Cabinet of the Director General of the Agency for Air Navigation Safety in Africa & Madagascar (ASECNA), in Dakar, Senegal. ASECNA is a 1949 multinational of 17 African States and France, to oversee the safety of air navigation in 16.1 million square kilometers of African airspace, roughly half of the African Continent's airspace, and one and half times European airspace. In ASECNA, he was appointed Head of the Bureau of External & Diplomatic Relations, which he combined with the Presidency of the Association of Expatriates, a key branch of the workers' Union.

In 2008, following the results of the worldwide audits of State-Members by ICAO, the Government of Burkina Faso called on him to lead the Country's civil aviation and meteorological Authority. By end of 2009, Burkina Faso quickly rose to count among the very few well-performing countries in the Continent. As Director General, he also played key roles in the following activities:

- The pacification and the revision of the constitution of ASECNA; an Agency that was on the brink of splitting apart due to a crisis, which started in November 2007;
- The election of Burkina Faso on the Council of ICAO during its 37th Assemble in October 2010, first time in the history of this State. Following that event to date, it pleased the Government of Burkina Faso to nominate him in his actual capacity.



Mr. Tim Zemanovic, CEO Aircraft Demolition and board member of AFRA

Tim Zemanovic is an entrepreneurial executive passionate about aircraft disassembly, part-out, and recycling. He has gained over 25 years of hands on experience in commercial aviation maintenance while working for United and Northwest Airlines. Mr. Zemanovic started out as an FAA licensed airframe and powerplant mechanic at United Airlines specializing in structural repair. While working for Northwest Airlines Tim served as a Technical Maintenance Instructor training others on structural repair. His training and experiences range from a complex understanding of nearly all systems within most major aircraft to the process and procedure required to properly disassemble and recycle them.

Aircraft Demolition is a Women-Owned Small Business that provides complete, part-out and disassembly services as well as demolition and recycling for aging aircraft and engines. Whether you have aircraft situated locally or globally, our team of professionals come to your site for 24/7 disassembly and recycling operations.

Aircraft Demolition, LLC is an accredited member of Aircraft Fleet Recycling Association (AFRA). They are the first company with a dual accreditation. Aircraft Demolition has demonstrated best management practices in the Disassembly of Aircraft, Powerplants and other Aerospace Materials as well as the Recycling of Aerospace Materials.



SESSION II - Aircraft End-of-Life: Scrapping and Recycling



Mr. Thomas Roetger, Environment – Technology, IATA

Thomas Roetger joined IATA in 2008 as Assistant Director Environment Technology. In this function, he works with aircraft and engine manufacturers, fuel suppliers and research establishments to implement IATA's strategy to reduce aviation's environmental impact through technological measures, including the use of biofuels. He is a member of ICAO-CAEP WG3 (Emissions) and AFTF (sustainable alternative fuels), is chairman of the end-users chamber in the Roundtable on Sustainable Biofuels (RSB), and the Environment and Energy working group's rapporteur of the Advisory Council for Aviation Research and Innovation in Europe (ACARE).

From 1988 to 2008 he worked at Airbus in Toulouse and Hamburg. A main focus of his activities was on environmental aspects such as noise and emissions reduction, in particular for the A380. He also has expertise in the areas of airport compatibility and cabin technology. He studied physics and chemistry in Heidelberg and Hamburg (Germany) and Grenoble (France) and holds a doctoral degree in physics.



Mr. Pete George, Engineering and Operations Technology, Boeing

Pete George is an Associate Technical Fellow Materials and Processes engineer in the Boeing Engineering Operations and Technology Next Generation Composites group. He has worked with composite materials at Boeing in Seattle for over 25 years with a focus on materials, processes and application development.

Currently Pete is the Principal Investigator for the Boeing Aircraft Composites Recycling project focusing on collaboration to develop recycling solutions for both factory and end of life scrap carbon fiber composites.



Mr. Ted Elliff, ENV-ISA

Mr. Ted Elliff has more than 30 years' experience working in the Environment domain. He worked 21 years for EUROCONTROL, the European Organisation for the Safety of Air Navigation where he is credited with having initiated and nurtured its environmental research programme.

Up until end 2012, he was leading the SESAR Environment support and coordination function, set up to ensure the programme conducted robust environmental impact assessments (in terms of fuel/CO₂, noise and LAQ). These assessments formed an important contribution to the Business Case for deployment of the new SESAR operational concepts.

Ted is now a senior associate with Envisa – one of Europe's leading aviation environment consulting companies. He is driving new business opportunities for this innovative company through web platform services and world class training solutions.

He graduated with a joint honours degree in pure and applied chemistry with environmental science from Cardiff in 1979.



SESSION II - Aircraft End-of-Life: Scrapping and Recycling



Mr. Bruce Parry, Head of Corporate Social Responsibility, Engineering, Bombardier Aerospace

Bruce Parry was appointed to his current position as Head of Corporate Social Responsibility for Bombardier Aerospace Engineering in May 2014, with responsibility for providing leadership and guidance on multiple CSR deliverables including the Environment portfolio.

He joined Bombardier Aerospace as an Engineering Specialist, Design for Environment, in 2007, and was named CSR Manager, Bombardier Aerospace in 2011, with responsibility for establishing and managing CSR programs and projects across all Bombardier Aerospace business units and core functions.

Prior to Bombardier, he worked with Airbus SAS where he started as an Environmental Engineer in 2001 and concluded as an Environment Manager in 2007.

Mr. Parry is currently involved in several environmental projects and programs involving ICAO's Committee on Aviation Environmental Protection (CAEP), the International Business Aviation Council (IBAC), the Air Transport Action Group (ATAG) and the International Aerospace Environmental Group (IAEG).

He graduated with an Environmental Quality and Resource Management Degree from the University of the West of England, in the U.K. in 2000.

Mr. Parry is based at Bombardier Aerospace headquarters in Montreal, Canada.



Mr. Olivier Malavallon, Airbus

In January 2006 Olivier joined Airbus Environmental Affairs in Toulouse to be in charge of the PAMELA-Life demonstration project, immediately followed by PAMELA-A380 demonstration project.

Once the PAMELA-A380 project was completed in early 2009, Olivier was in charge of Hazardous Substances management in Airbus Environmental Affairs.

In 2010 Olivier joined Airbus Customer Services Strategy where he is in charge of business development. At that time he became member of the board of TARMAC as an Airbus shareholder representative.

In 2011 he successfully led the TARMAC team bidding to operate the platform of Teruel (Aragon, Spain), and finalized the contractual agreements in February 2012.

Since 2012, through different initiatives, Olivier promotes the use of used parts and equipment coming from aircraft part-out in Airbus Customer Services activities.



SESSION III - Current and Future Technologies for Green Aircraft Operations



MODERATOR: Mr. Farid Zizi, Alternate Representative of France on the Council of ICAO and President, Air Navigation Commission

Farid Zizi is the President of the Air Navigation Commission in ICAO. Nominated by France in 2010 to the Air Navigation Commission, he has been, among other activities, in charge of coordinating ANC preparation and follow-up on the 12th Air Navigation Conference which led to the last edition of the GANP. Graduated from the Ecole Polytechnique in Paris and ENAC in Toulouse as Civil Aviation Engineer, he holds a PPL Licence and was also trained as an Air Traffic Controller as well as an ATSEP.

Before arriving to Montreal, he was in charge of Education and Research in ENAC for the whole civil aviation domain, managing around 1600 Students and 6000 trainees per year. He was also involved in the SESAR programme and chairman of the Eurocontrol Advisory Group for ATM training after having led ENAC development in ATM. Before ENAC, he was in charge of operational and technical requirements and maintenance operations of ATM systems for French Airports and ACCs at the Operational Direction of DSNA, the ANSP for France after having been Deputy Director of Bordeaux ACC. During that time, he was in charge of European activities in ATM and the French Italian coordination plan.



Mr. Ted Thrasher, Environment, ICAO

Ted Thrasher is the Environmental Officer for Modelling and Analyses at ICAO, where he is responsible for the modelling and assessment of aircraft noise and aircraft engine emissions. He coordinates related activities for ICAO's Committee on Aviation Environmental Protection (CAEP) in support of the development of international environmental standards for aircraft and the development of guidance material. Prior to joining ICAO, Mr. Thrasher was the Director of Simulation, Modelling, and Analysis for CSSI in Washington, D.C. Mr. Thrasher holds a Bachelor of Science degree in Aviation Engineering from The Ohio State University, a Master of Science degree in Systems Engineering from Johns Hopkins University, and a commercial pilot's license.



Mr. Christopher Dorbian

Mr. Dorbian is an Operations Research Analyst in the United States Federal Aviation Administration (FAA) Office of Environment and Energy. He has an extensive background in modeling the environmental impacts of aviation and in operations analysis, having studied under the FAA's Partnership for Air Transportation Noise and Emissions Reduction (PARTNER) Center of Excellence at the Massachusetts Institute of Technology. At the FAA, he is a program manager for the FAA's Environment & Energy Operations Research Program. Mr. Dorbian is a member of ICAO CAEP Working Group 2 and the Global Market-Based Measure Technical Task Force.



SESSION III - Current and Future Technologies for Green Aircraft Operations



Mr. Robert Brons, Flight Technical Committee, International Federation of Airline Pilots Associations (IFALPA)

Robert Brons was born in Rotterdam, the Netherlands, on 23 May 1965. He graduated as MSc from Delft University of Aerospace Engineering in 1989, specializing in the human-machine interface design and human modelling. He completed his airline pilot training on the Rijksluchtvaartschool in Eelde (1990) and his 2-year engineering-pilot post-graduate course at Delft University (1991).

In 1991 he started as airline pilot for KLM, Royal Dutch Airlines, based in Amsterdam. Flying experience ranges from the Cessna Citation, DC-10, A310, B767, B737; since 2002 as a captain. At present he is captain on the Airbus A330, conducting intercontinental flights. He has been flight instructor/type rating

examiner from 1996 until 2002. He accumulated over 11000 hrs flying hours.

Since 1993 Robert Brons is involved in several technical committees, both in the national ALPA and in IFALPA. He has served as chairman at the flight technical committee of VNV from 1996-1999 and from 2009 on. Since 1999, R.C. Brons is member of the Aircraft Design and Operations Committee of IFALPA, the International Federation of Airline Pilots' Associations. IFALPA is representing over 100.000 airline pilots from 101 Member Associations from around the world. He is specialized in aircraft operations, crosswind operations, green operating procedures and safety management.

Since 2004, he represents IFALPA at ICAO CAEP, the Committee on Environmental Protection, as the green pilot attempting to share operational expertise and to promote safe and environmentally sustainable aviation.



Mr. Douglas Stoll, Principal Engineer, Operational Efficiency, Environmental Performance, Boeing Commercial Airplanes

Doug Stoll leads the strategy and implementation effort for Operational Efficiency for Boeing Commercial Aircraft, Product Development. His responsibility includes accelerating operational concepts that improve both fuel efficiency and community noise reduction. Doug graduated from the U.S. Air Force Academy with a B.S. in Physics and later earned advanced degrees in Physics, Systems Engineering and Business Administration.

Professionally he has served as a B-52 pilot and has held several positions in avionics systems engineering and program management. Currently in his role in airplane product development he actively supports CANSO as the co-chair of the Environment Workgroup and as the CANSO observer on the CAEP-WG2 effort to assess the benefits of ASBU implementation.



SESSION IV - Eco-airports and Innovative Design Concepts



MODERATOR: Mr. Gilles Bourgeois, Chief International Aviation, International Operations, Transport Canada, and Member of Canada on the ICAO Committee on Aviation Environmental Protection

Mr. Bourgeois is Chief of the Aviation Environmental Protection and Standards Division within Transport Canada's Aviation Safety Directorate. He currently also serves as Canada's representative to the International Civil Aviation Organization's Committee on Aviation Environmental Protection.

He is a 29 year veteran of Transport Canada and much of his tenure with the Department has involved an environmental component. His environmental responsibilities have evolved from aviation community noise to global impacts of aircraft and aircraft engine emissions.

Mr. Bourgeois hold a Bachelor of Applied Sciences (Industrial Engineering) from the Université de

Moncton.



Mr. Xavier Oh, Senior Manager, Environmental Protection, Airports Council International (ACI)

Xavier Oh has been Senior Manager Environmental Protection at ACI since September 2005.

He is the ACI Observer on ICAO's Committee on Aviation Environmental Protection (CAEP) and participates at all levels from the triennial CAEP meetings and Steering Group to the technical working groups on noise, emissions, operations and modelling. He also supports and coordinates airport participation and input on these groups.

As the secretary of ACI's World Environment Standing Committee (WESC), one of his main tasks is developing, coordinating and implementing policy and positions on all issues relating to the environment and airports. Other WESC tasks include supporting environmental training for airports, sharing best practice between airports and working with other aviation industry organizations.

Xavier's background includes mechanical engineering studies in Australia and Canada, working as a consultant in machine and structural dynamics in Australia and Malaysia, and also as an acoustical engineer in New Zealand.



Mr. Taizo Nishiyama, Airport Facilities Division, Japan Civil Aviation Bureau

After graduation the University of Iowa in USA in 2005, he started to work in Tokyo Denki University as a lecturer. Then, he worked at Japan Institute of Construction Engineering (JICE), which was government organized association. He mainly dedicated to the feasibility study of new ITS system using Ubiquitous technology.

In 2008, he started to work in research division of NIPPO Corporation, the leading company of pavement construction and research. He has been mainly researching on implementation of recycle pavement materials, asphalt emulsion mixture, computational pavement analysis, and so on.

In 2013, he has started to work in Ministry of Land, Infrastructure, Transport and Tourism, Civil Aviation Bureau. He is dedicating his skills to government related challenges, especially environmentally-friendly measures on airport, etc.



SESSION IV - Eco-airports and Innovative Design Concepts



Mr. Panagiotis Karamanos, Airport Carbon Accreditation

Panagiotis Karamanos chaired the Task Force of Airports Council International-Europe that developed Airport Carbon Accreditation and currently serves as the Senior Advisor to this unique voluntary carbon management certification standard for airports. As part of a European Union initiative he is also the Senior Environmental Expert to the Directorate General of Civil Aviation of India on noise, climate change, and other environmental issues. Earlier, for more than a decade, he managed the Environmental Department at Athens International Airport.

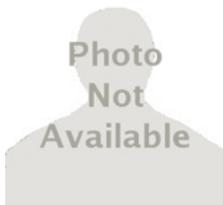


Mr. Isaiah Cox, CEO WheelTug plc.

Isaiah Cox is the CEO and a founder of WheelTug plc. Over the past decade, Isaiah brought together an incredibly strong group of aerospace, engineering and scientific experts dedicated to solving the increasing costs of congestion and the inefficiencies of aircraft operations on the ground. By keeping engines off during ground operations for airline customers, WheelTug aims to both speed up turnaround time and to simplify gate operations while providing several safety and environmental benefits.

Mr. Cox has an A.B. from Princeton University, and conducted post-graduate work at King's College London. Mr. Cox has over 50 patents pending and issued.

Mr. Rudy Dudebout, Honeywell Aerospace



Dr. Rudy Dudebout serves as technology fellow at Honeywell Aerospace. In this capacity, Dr. Dudebout provides technical oversight and strategic research leadership on combustion systems and emissions for APU's and propulsion engines.

Mr. Sandy Webb, Environmental Consulting Group



Sandy Webb, a chemical engineer by training, has over 25 years of experience in strategic environmental management addressing local air quality impacts, global climate change, sustainability planning, alternative jet fuel development, and environmental program management. He is Managing Director of the Environmental Consulting Group, Inc. and serves as Senior Advisor to Wireless Advanced Vehicle Electrification (WAVE), Inc., developer of wireless power transfer technology that makes electric buses practical for airport circulator and shuttle service, eliminating fuel use and emissions.



SESSION V - Renewable Energy for Aviation



MODERATOR: Capt. Aysha Al Hameli, Representative of the United Arab Emirates on the Council of the ICAO

Since October 2009, Capt. Aysha AL Hamili heads the Permanent Mission of the UAE on the ICAO Council – becoming the first ever female Emirati in charge of a diplomatic mission, and the youngest ever Permanent Representative to the ICAO Council. Just recently, she has been appointed as Vice-chairperson of the Air Transport Committee. Before coming to ICAO, Capt. AL Hamili was head of UAE’s General Civil Aviation Air Transport Department, where she was in charge of bilateral air services negotiations. She participated in more than 40 bilateral negotiations, and successfully chaired the

working group that drafted UAE’s air transport policy.

In addition to her diplomatic and policy skills, Capt. Al Hamili holds an airline transport pilot license (ATPL). She started flying at the age of 16 when she acquired her Private Pilot License (PPL), becoming the first ever female Emirati pilot. She started her career as a commercial pilot with Abu Dhabi Aviation on the Dash-8.

She received a bachelor’s degree in Social and Behavioural Sciences from Zayed University with an area of speciality in International Studies and she holds a Master of Science in Air Transport Management from City University of London.

Capt. AL Hamili has received several awards recognizing her contribution to the development of gender equality and civil aviation in the UAE.



Mr. André Borschberg, co-founder and CEO, Solar Impulse

Fascinated by aviation from an early age, André Borschberg trained as a pilot at the Swiss Air Force School, first of all on Venoms, then Hunters and Tigers, airplanes that he has piloted for more than twenty years. Today, he collects professional pilot’s licences for airplanes and helicopters.

The organisation, management and development of companies are his strong points. He was trained at McKinsey’s for 5 years, one of the world’s leading management consultancies. He co-founded a risk capital company, started two technology companies, and became involved on the social front, on behalf of the Restos du Cœur and helping the sick. His wide range of professional competencies, versatility and perseverance enable him to succeed wherever he goes: from finance to marketing, from engineering problems to human resources.

André Borschberg is a member of such notable associations as the prestigious Young Presidents’ Organization and the Organisation of Chief Executives. CEO of Solar Impulse and Bertrand Piccard’s associate from the project’s inception, he is a passionate company manager, who has established and motivated a team of 65 people within Solar Impulse, composed of the best specialists coming from highly varied origins and backgrounds.



Mr. Stephen Barrett, Clean Energy, HMMH

Mr. Stephen Barrett is the Director of Clean Energy at Harris Miller Miller & Hanson, and a LEED Accredited Professional. He is also Vice President of Minuteman Wind LLC which is developing a 12.5 MW wind project in Savoy Massachusetts. Mr. Barrett has 20 years of experience in environmental policy and regulation. His professional career includes work for federal and state agencies, and private consulting firms. For the past 10 years, he has focused on renewable energy and sustainable development. His current focus is on compatible siting of renewable energy and emission reduction projects at airports nationwide. He is the lead author of the Federal Aviation Administration’s “Solar Guidance Document” (November 2010) and the Principal Investigator for the Airport Cooperative Research Program Project “Energy Facilities Compatibility with Airports and Airspace” (May 2014). He is

also working on tidal and wave energy projects proposed in Alaska, Massachusetts and New Hampshire. He holds a BA in International Policy from Union College in Schenectady New York and an MA in Environmental Policy and Science from the University of Virginia in Charlottesville.



SESSION V - Renewable Energy for Aviation



Mr. Jonathan Frank | Business Development Manager, SunEdison | Co-Chair, Emerging Leaders for Solar Energy Sunedison

As Business Development Manager with SunEdison Jonathan is focused on the development of investment grade commercial rooftop and ground mounted solar projects within the Canadian market. Jonathan previously worked with RESCo Energy Inc. an award winning solar services provider. Jonathan has helped bring to life some of Canada's largest and most innovative rooftop solar projects. Jonathan's master's thesis at the University of Waterloo addresses the energy-sustainability nexus with a focus on the challenges of socio-technical system transition.

Jonathan is a strong believer in philanthropic ventures. He is one of the founding executives of Emerging Leaders for Solar Energy and currently serves as Co-Chair of the National Board of Directors. He is also the co-founder of Spark Music (a non-profit organization that uses live music to get people engaged in environmental and social causes) and a dedicated volunteer for almost a decade with Camp Oochigeas (where he leads canoe trips focused on leadership training for kids with cancer). Outside of these activities Jonathan is Managing Partner of Frank Brothers Guitar Company, a small family business that designs and manufactures professional quality instruments.



Mr. Christoph Falter, Bauhaus-Luftfahrt

He has studied mechanical engineering at the universities of Stuttgart, Germany, and Zurich, Switzerland, and has specialized in renewable energy technologies with a focus on solar energy conversion. After his graduation, he went to Bauhaus Luftfahrt in Munich, Germany, where he is currently working as a research associate in the group of future technologies and ecology of aviation. Bauhaus Luftfahrt is a non-profit research organization with a long-term perspective on aviation. He is predominantly engaged in the European Union-funded project "SOLAR-JET" that deals with the production of renewable jet fuel from sunlight, carbon dioxide and water. With this topic, he is also enrolled as a PhD student at the RWTH University of Aachen, Germany.



Mr. Takayuki Kojima, Associate Senior Researcher, Propulsion Systems Research Group, Institute of Aeronautical Technology, JAXA

In 2002, he received his graduate education at the University of Tokyo earning a Ph.D in aerospace engineering and entered the National Aerospace Laboratory of Japan (NAL) which is now Japan Aerospace Exploration Agency (JAXA). So far, he has many experiences in the area of liquid hydrogen hypersonic transport (HST) and engines, such as vehicle thermal design, engine design, wind tunnel testing, and engine testing with liquid hydrogen as well as commercial studies. Especially, he has experience in collaborative wind tunnel testing at both ONERA in France and NASA. In 2010, he studied at the University of Maryland as a visiting research associate. In 2012 and 2013, he worked at Strategic Planning Office of headquarter of JAXA to coordinate R&D activities and budgets of ministries. Currently, he is back to researching position as Associate Senior Researcher of Propulsion Systems Research Group of Institute of Aeronautical Technology.



SESSION VI - Sustainable Alternative Fuels



MODERATOR: Mr. Norberto Luongo, Alternate Representative of Argentina on the Council of ICAO

Mr. Luongo is the Alternate Representative of the Argentine Republic on the ICAO Council and 3rd Vice-Chairman of the ICAO's Legal Committee. He is also the Director of Aeronautical Legislation and Air Services Agreements (National Direction of Air Transportation) at the Argentinian National Administration of Civil Aviation. He is Chief/Member of the Delegation of Argentina participating on numerous international events, such as LACAC: meetings of the Executive Committee, Assemblies and meetings of the Group of Legal Experts, and ICAO: ICAO Legal Committee Sessions, Diplomatic Conferences, ICAO Assemblies, Aviation and Climate Change Panels, etc. He has a Master's Degree in Air and Space Law from McGill University, Faculty of Law in Montreal, Canada.



Mr. Philippe Novelli, Environment, ICAO

Mr. Philippe Novelli has spent most of his career at ONERA, the French Aerospace Lab, where he has been working in the field of CFD, combustion and system analysis, as well as research coordination, for various propulsion systems.

He started working on alternative fuels for aviation in 2008 and became the coordinator of the SWAFEA European study addressing the feasibility and potential impacts of implementing alternative fuels in aviation. He was also the leader of the alternative fuels group of the Advisory Council for Aeronautic Research in Europe.

He joined ICAO's Environment Branch in July 2012 where he is in charge of sustainable alternative fuels.



Mr. Michael Gill, Aviation Environment, ATAG

Michael Gill is executive director of the Air Transport Action Group (ATAG), the only global association that represents all sectors of the air transport industry. Its mission is to promote aviation's sustainable growth for the benefit of global society.

He was appointed as Director, Aviation Environment of the International Air Transport Association (IATA) in November 2013, with responsibility for developing and implementing IATA's work in the environment field, particularly in the areas of climate change, noise, biofuel commercialisation and the IATA environmental assessment programme.

Prior to that, he spent six years as senior legal counsel in IATA, supporting IATA's external affairs portfolio. In that role, he led IATA's delegation to three ICAO diplomatic conferences on airline regulatory and security issues.

Before joining IATA in May 2007, Michael was an aviation lawyer in private practice at the Paris Bar, acting for airlines and their insurers.

He holds law degrees from both King's College, London and the Sorbonne University in Paris, as well as a masters degree from the University of Edinburgh. He is admitted as a solicitor of the Supreme Court of England and Wales and an avocat in France.



SESSION VI - Sustainable Alternative Fuels



Mr. Nathan Brown, Alternative Jet Fuel Project Manager, Federal Aviation Administration (FAA), U.S.

Nate Brown is Alternative Jet Fuel Project Manager in the FAA's Office of Environment and Energy, the office responsible for U.S. aviation environment & energy policy, research and development. At FAA, Nate is responsible for management of alternative jet fuel R&D under the Continuous Lower Energy Emissions and Noise (CLEEN) program, coordination with other U.S. government agencies, and execution of international cooperative agreements. He manages FAA support for the Commercial Aviation Alternative Fuels Initiative (CAAFI) a public-private partnership to develop and deploy sustainable alternative jet fuels in which he serves as Head Advisor for Strategy and Implementation. Nate is also a participant in the International Civil Aviation Organization's (ICAO) Committee on Aviation Environmental Protection Alternative Fuels Task Force.

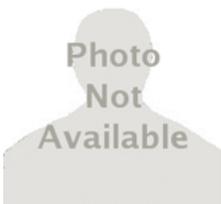
In the past Nate has worked for the U.S. Department of Transportation's Research and Innovative Technologies Administration (RITA) and on international climate change initiatives at the U.S. Department of State. Prior to joining the FAA he worked in international development and was a Peace Corps Volunteer in Ecuador. He holds a Masters degree in international environmental resource policy from the Fletcher School, Tufts University and a B.A. with honors from Haverford College.



Mr. Philippe Marchand, TOTAL

Philippe Marchand is Director of Biotechnologies for the Renewable Energy Division of TOTAL, the French Oil Major; he is a graduate from Ecole Nationale des Ponts et Chaussées (Paris, France) and from Ecole Polytechnique de Montréal (Canada); he joined TOTAL in 1979 and has held various positions in the Refining Division, in process engineering and optimization, in France and in Africa, in supply, finance and economics management in Normandy Refinery (France), in supply and refining general management in the UK, in overall coordination of refining activities in the Americas, in Corporate Planning, coordinating the biofuels strategy for the TOTAL Group; in his previous position, he led the biofuels development activities in the Renewable Energy Division.

Mr. Fernando Garcia, Amyris-Total Biojet: Breakthrough Solutions for Aviation



Mr. Fernando Garcia is the Senior Director of Scientific and Regulatory Affairs at Amyris, Inc. Mr. Garcia's role at Amyris is to ensure product regulatory compliance, lead with certification and validation of the company's renewable chemicals and fuels. Mr. Garcia collaborates with the company's joint development partner TOTAL with the commercialization efforts of their innovative renewable jet fuel. Mr. Garcia was previously with Bombardier based in Washington, DC.



SESSION VI - Sustainable Alternative Fuels



Mr. Gerard Ostheimer, Global Lead, Sustainable Bioenergy High-Impact Opportunity, Sustainable Energy for All (SE4ALL)

Dr. Ostheimer is the Global Lead for Sustainable Bioenergy under the UN and World Bank initiative Sustainable Energy For All (SE4All). In his current role, he promotes the development and deployment of sustainable bioenergy solutions that can help achieve the SE4ALL goals of 1) Universal Energy Access and 2) Doubling the Use of Renewable Energy. Specifically, Dr. Ostheimer works at the interface between the private sector, multilateral financial institutions, and national governments to create well-functioning public-private partnerships that accelerate adoption of bioenergy as a means to sustainable development.

Previously, Dr. Ostheimer served as a Science Advisor for the Foreign Agriculture Service of the U.S. Department of Agriculture where he worked at the interface between sustainability, biofuels, international development and international trade in agricultural products. Dr. Ostheimer was the U.S. government technical lead to the Global Bioenergy Partnership (GBEP) and contributed to finalizing the GBEP Indicators of Sustainable Bioenergy Production and Use. Dr. Ostheimer earned a Ph.D. in molecular biology at the University of Oregon and did postdoctoral work in the systems biology of cancer at MIT.



SESSION VII - Financing and Assistance



Mr. Robin Rix, United Nations Framework Convention on Climate Change (UNFCCC)

Robin Rix has served with the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) since 2009. His duties include supporting the intergovernmental negotiations as lead officer on the future role and connectivity of global carbon pricing mechanisms. He also works on initiatives to strengthen and streamline market-based mechanisms, including the Clean Development Mechanism (CDM). Prior to joining the United Nations, he was a lawyer in the environment and climate change practice group at Clifford Chance LLP in London. He holds law and undergraduate degrees from the University of Toronto and a master's degree in political science from the University of Oxford.



Mr. Marcel Alers, Energy Infrastructure, Transport and Technology, United Nations Development Programme (UNDP)

Marcel Alers is UNDP's global Head of the Energy, Infrastructure, Transport and Technology team. Marcel is an experienced development professional with 27 years of experience in environmental and energy management. He has a broad range of expertise and experience. He first joined UNDP in 1999, focusing on GEF funded project development and developed a significant portfolio of clean energy projects, including a large number of energy efficiency projects in particular in the buildings sector. Since 2005 he has been overseeing UNDP's global clean energy portfolio and is leading UNDP's programming in the area of sustainable energy. Prior to joining UNDP, Marcel worked as a senior environmental specialist at the African Development Bank with a special focus on energy and infrastructure. Before that he managed several sustainable forest and protected area management projects in Cote d'Ivoire and in several Central African countries. He has working field experience in more than 40 countries worldwide.



Mr. Alexandre Kossoy, Senior Financial Specialist, Carbon Finance Unit, World Bank

Since 2002, Mr. Alexandre Kossoy is a Senior Financial Specialist at the Carbon and Climate Finance Unit of the World Bank.

As the team leader of the World Bank annual report on carbon pricing over the past 5 years, Mr. Kossoy has officially launched these reports in international forums and events since 2010. In addition, he oversees many financial activities within the Unit and has been actively involved in several financial instruments related to climate finance.

Before joining the World Bank, Mr. Kossoy was in the private sector, working in a variety of positions for international organizations such as Monsanto, Pepsico, and Rabobank.

Mr. Kossoy holds a Bachelor's degree in Agricultural Engineering from the University of Sao Paulo (Brazil) and a Master's degree in Environmental Engineering Sciences from the Israel Institute of Technology (Israel).



SESSION VII - Financing and Assistance



Mr. Christopher Ross, European Commission

Christopher Ross is the Head of the EU Office to ICAO since August 2012. He has worked in the European Institutions since 1993. Prior to which he worked as a market analyst at UTA French Airlines.

Mr. Ross has worked at the European Union Delegation in Washington on a wide range of aviation issues, including EU-US air service negotiations, aviation security, environmental issues (noise and emissions), and the EU-US GPS-Galileo satellite navigation agreement. Mr. Ross has also co-ordinated the Directorate-General for Energy's overall energy relations with the Caucasus and Central Asia, including the promotion of new energy corridors. Throughout, Mr. Ross has worked with the respective Cabinets of European Commissioners and with European Union Member States in the relevant EU Council formations.

Mr. Ross graduated from Institut d' Etudes Politiques de Paris in 1991 where he specialised in European Community Law.

Mr. Daniel Fuller, Partner, Fuller Smith LLC



Fuller Smith LLC is an advisor and investment manager focused on the low cost production and more efficient management of food, energy, and basic materials, with reduced environmental impacts. Fuller Smith's advisory work includes strategy and development support to development banks, national governments, corporations, and non-profits. Fuller Smith also manages a direct private equity investment platform, making control investments on behalf of several large family offices and high net worth individuals. From 2005 through 2008, Mr. Fuller worked as the Chief Operating Officer of RC Energy, LLC, a subsidiary fund of the private equity fund Ranch Capital, LLC focused on low-cost alternative fuels, energy storage, and industrial efficiency technologies. While at RC Energy, Mr. Fuller led the review and due diligence of investment opportunities, advised a number of emergent technologies in strategic business development, and managed the operational review and optimization of a Brazilian ethanol production company. Prior to joining RC Energy, Mr. Fuller served as an independent consultant conducting due diligence and advisory work on renewable fuels and technology transactions for private equity firms. Prior to consulting, Mr. Fuller worked in Morgan Stanley's investment banking division where he focused on both corporate finance and M&A advisory. Mr. Fuller received a Bachelor's Degree in Geosciences from Princeton University.