



**Keynote Address**  
**By the Secretary General of the**  
**International Civil Aviation Organization**  
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**to the 2017 Annual Meeting & Conference**  
**of the American Bar Association's Forum on Air & Space Law,**  
**Co-Sponsored by McGill University**

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Good morning ladies and gentlemen,

1. I would like to thank the American Bar Association and the Chair of this Forum on Air and Space Law, Ms. Andrea Brantner, for the very kind invitation to join you here today.
2. Being a lawyer myself, it has always been a great pleasure to find myself among legal colleagues in the course of my duties on behalf of ICAO and international civil aviation.
3. This certainly includes this event today, where it will be my great pleasure to provide you with an update and overview on three significant developments which have recently taken place at ICAO in the field of international air law.
4. These include new rules in the area of international aviation security; the efforts of ICAO Member States to reach carbon-neutral growth in international civil aviation; and lastly the ushering in of a bold and very exciting new era in air law as we begin to explore the legal and regulatory challenges posed by new unmanned and suborbital and orbital aircraft innovations.
5. In the aviation Security and Facilitation domain, ICAO remains a forerunner by continually anticipating and addressing new and emerging threats.

6. Trans-border terrorist movements, landside airport attacks, threats posed by insiders and airport staff, and the design and use of increasingly sophisticated improvised explosive devices are all significant concerns today.
7. Our expanding reliance on information technology in all areas of aviation – from air navigation to communications to reservations and flight management – also exposes us to cyber vulnerability. No matter the nature or the source of these threats, we must ensure that local and international law enforcement and security personnel can respond on a coordinated and confident basis when seeking to deter, detect, and prevent such attacks.
8. As was the case in the 1960s and in the 1970s, when terrorist threats and hijackings first began to target aviation, our agency continues to serve as a vital forum where countries can review, amend and ultimately agree on new and tailored standards, recommended practices, and legal instruments to mitigate a wide range of security threats.
9. Among these legal instruments, ICAO has recently adopted new treaties relating to aviation security, such as the *2010 Beijing Convention and Protocol* which criminalizes new categories of offences; and the *Montreal Protocol of 2014*, which amends the *Tokyo Convention of 1963* by addressing the increasing incidences of unruly and disruptive passengers.
10. Additionally, we should recognize that while most international aviation security treaties fall into the category of ‘general prevention or ‘deterrence’, ICAO also tackles specific prevention on a day-to-day basis through its technical aviation security regulatory work.
11. These efforts have been primarily reflected in the recent amendments to Annex 17 to the Convention, which is fully dedicated to security provisions.
12. Specifically, in order to respond to the evolving and emerging threats, Annex 17 has been amended to include new provisions for landside security – which governs those areas of airports prior to the Security checkpoints and scanners – as well as for cybersecurity.
13. The landside security amendments will allow our Member States to respond with more flexibility and certainty to these types of threats. They became globally applicable just last month, on 3 August.

14. Regarding the new Annex 17 provisions on cybersecurity, these also help to draw our attention to how technologically dynamic aviation is. This has been the case throughout the history of our sector.
15. Manufacturers and operators have been determined early-adopters of latest innovations, and it is essential at ICAO that we not only accommodate, but also anticipate and facilitate this dynamic.
16. As I'm sure you can understand, this is an incredible challenge. But by ensuring we're suitably prepared and proactive, we help the industry to implement and leverage these improvements quickly and effectively, and most importantly on a globally-aligned basis. This in turn improves overall network performance, whether in terms of safety, security, efficiency or emissions mitigation metrics, and leads to direct and positive impacts for operators and their customers.
17. Speaking of emissions mitigation, I would like to turn now to the Environmental domain and highlight for you several key developments which were achieved last October, at the 39th Session of the ICAO Assembly.
18. Allaying aviation's impacts on climate change is something we take very seriously, and with the cooperation of States and industry stakeholders we've been undertaking a wide range of measures toward this goal since 2010.
19. As many of you are aware, our most recent Assembly made a series of very important decisions in some of these areas, following several years of intensive effort and negotiation.
20. One of the most historic achievements was its adoption of Resolution A39-3, on the Carbon Offsetting and Reduction Scheme for International Aviation – or 'CORSIA'.
21. The CORSIA is historic in that it represents the very first global instrument of its kind. In addressing the emissions of a major industry sector, at the global level, its establishment reflects not only the concrete commitments and actions of ICAO and its Member States, but also our sector's clear determination to achieve its aspirational goal of carbon neutral growth from 2020 onwards.
22. As I just mentioned, however, CORSIA by no means stands alone in terms of aviation's multi-pronged efforts. The emissions reductions it helps us deliver are intended to *complement* the other

elements of the overall ICAO framework on CO<sub>2</sub> mitigation, which includes technological innovations in the design of aircraft and on avionics, streamlined operations such as those ICAO is now implementing globally for Performance-based Navigation (PBN) or Air Traffic Flow Management (AFTM), and the intensified development and deployment of sustainable alternative fuels.

23. To date, ICAO Member States representing almost 90% of international air traffic have already announced their voluntary participation in the pilot phase of CORSIA.
24. This commences in 2021, and I would add that this level of commitment, being established so quickly, has certainly exceeded many parties' expectations.
25. These rapid commitments are also I think a testament to the higher levels of political will now in place globally to address climate change, and provides us with a very positive collective outcome to motivate further action and progress in other areas.
26. Implementing CORSIA in the short time ahead of us is a significant challenge, and one which ICAO is facing together with its Member States.
27. As part of the preparatory work, the ICAO CAEP is currently developing the Standards and related guidance, provisions which are presently scheduled to be reviewed and adopted during the ICAO Council's 2018 Sessions.
28. We are also undertaking a wide range of outreach, awareness, and related activities, in order to ensure CORSIA is both well understood and timely implemented.
29. This includes technical work on the definition of its Emissions Unit Criteria and Monitoring Reporting and Verification (MRV) protocols, and lastly the Registry framework which is so essential to its successful roll out.
30. With respect to additional new technology provisions in the Environmental area, the ICAO Council has also just adopted, this past March, a new Global CO<sub>2</sub> Certification Standard for Aircraft.

31. This Standard is also a first for any global industry sector, and will be essential to assuring guaranteed reductions in aviation emissions for the next generation of aircraft entering service as of 2020.
32. Next, I would like to turn now to some ICAO initiatives for the regulation of some rather revolutionary new air transport technologies; namely unmanned aircraft and new aero-space vehicles.
33. The subject of unmanned aviation was raised numerous times at our last Assembly, and is clearly a priority for our Member States. At issue were the increasing challenges they have been facing in developing regulations and traffic management approaches for small unmanned aircraft, commonly referred to as ‘drones’.
34. There have been increasing reports of close encounters between commercial aircraft and smaller consumer unmanned aircraft, and these safety concerns, in addition to expectations for more pervasive use of these aircraft by companies and civil society, made it imperative for ICAO to address them in the near-term.
35. In response, the 2016 Assembly requested that ICAO expand the scope of its work to provide a baseline of global harmonization provisions for all types of unmanned aircraft and their operations.
36. What must be recognized in this context is that engaging on these issues could lead to ICAO’s unusual involvement in the arena of domestic operations.
37. But in light of the fact that both our Member States, and companies such as Amazon and Google, have identified a need for greater global alignment with respect to how local communities accommodate these new aircraft and operations, ICAO has agreed to help bridge this gap.
38. Some initial concerns surrounded the fact that smaller UAVs do not even qualify as ‘aircraft’ under the Chicago Convention and its Annexes, which meant in turn that business-as-usual wasn’t an option.

39. As an alternative to ensure a more rapid response, ICAO instead issued a Request for Information so that the interested States and companies could submit their preferred proposals.
40. In addition to Amazon and Google, Boeing, Rockwell Collins, General Electric, Thales, the Governments of France and Italy and many others have now been selected to present their proposals at the inaugural Drone Enable event we're convening at our Headquarters next week.
41. Apart from streamlining the innovations to come in domestic UAS traffic management, ICAO of course has been hard at work for some time now developing the formal regulatory framework that will facilitate international Remotely-piloted Aircraft Systems (RPAS) operations conducted in accordance with instrument flight rules.
42. Our RPAS work programme, when completed, will provide the basis for a certificated remotely piloted aircraft (RPA) to operate in sequence with manned aircraft, and employ the same procedures and flight separation standards.
43. The focus here is on the larger and highly capable segment of the unmanned aircraft systems family which operates from airports, and interacts with air traffic control and pilots.
44. This work entails the development and adoption of hundreds of new Standards and Recommend Practices to be added to the more than 12,000 civil aviation SARPs already contained in the Convention's Annexes. Indeed fully 18 of our 19 Annexes to the Convention will be impacted.
45. Comments on the first large SARPs package, which governs remote pilot licences and related procedures on training, were submitted as of 4 August of this year.
46. Another point I should stress is that the study of legal issues relating to remotely piloted aircraft is presently the highest priority work item of the ICAO Legal Committee.
47. Pursuant to a decision of the 38th Session of the Assembly, and subsequent Council guidance, our Legal Affairs and External Relations Bureau undertook a study on the liability of remotely-piloted aircraft which was presented to the 36th Session of the Legal Committee.

48. While satisfied with the results of this analysis, the Committee also concluded that remotely-piloted aircraft issues should remain on its work programme, mainly in light of anticipated future concerns regarding RPAS operations over the high seas, cross-border flightpaths, and changes in possession/control of these craft during while in international airspace.
49. The Committee is now also analysing responses it has received to a special questionnaire on the national approaches being set out while identifying international issues which are beyond their authority.
50. The results of this analysis will be reported to the 37th Session of the Legal Committee in 2018.
51. Sub orbital flight innovations are the last item I would like to discuss with you today. While these still remain at a somewhat nascent stage, both technologically and in terms of their operational and regulatory integration, there is no longer any doubt that space operations will soon be traversing traditional civilian airspace much more frequently than is the case today.
52. Traffic in the skies is traffic in the skies, after all, and it must all be integrated safely, securely and efficiently with traditional scheduled and general aviation operations.
53. In this context, ICAO together with the UN Office for Outer Space Affairs (UNOOSA), have worked over the past two years with an expert group to identify several pressing issues that need to be addressed in the near-term.
54. These include:
  - Safety Management of Air Space;
  - Joint use Air and Space port safety and operations;
  - Space vehicles which are launched from aircraft in flight;
  - And lastly 'space planes'.
55. Our present goal is to resolve these issues and establish a timeline for the development of related provisions in the 2019 revisions of the ICAO *Global Plans for Aviation Safety and Air Navigation Capacity and Efficiency*.

56. We also just concluded the Third ICAO/UNOOSA Symposium, which was hosted in Vienna last month, where we heard many interesting perspectives on the latest developments in general and commercial space transportation, suborbital operations, and also the overall sustainability of aerospace activities.
57. At present the outer space convention managed through UNOOSA only specifies conditions regarding peaceful use and other general aspects of future operations, but with this latest work we are definitely getting into a new level of detail regarding aerospace operations, and there is even some discussion regarding whether the aviation Convention may provide a helpful template for future aerospace management solutions.
58. I mentioned earlier that our work with unmanned aircraft is now high on the agenda of the ICAO Legal Committee and I would only wish to add that it is also presently focused on matters regarding global satellite navigation systems, safety aspects of economic liberalization and Article 83 *bis*, and determining the status of an aircraft, among other topics.
59. Ladies and gentlemen, what I have presented to you today is only a small fraction of the work that is currently being carried out at ICAO.
60. As you have seen, our Organization continues to be at the forefront of new developments in international civil aviation, and more and more today we are being called to reconsider and adapt our mission and role to new technologies and operations.
61. In a sense we now find ourselves, more than seventy years after the signing of the Chicago Convention, at the dawn of an entirely new era in how humanity makes use of and shares the skies for our common betterment.
62. Many of the new air and space craft now being developed will be changing how we travel, interact and conduct business with one other very significantly in the years ahead, and my challenge to all of you today is the same as that which ICAO now faces: to remain open, imaginative, responsive and flexible in order to assure these exciting innovations are both nurtured and effectively regulated.

63. It's my greatest hope of course that some of these points may have excited you regarding future careers and activities in the aviation sector, and I would draw your attention in this regard to the Next Generation Aviation Professionals Global Summit which we are convening at our Headquarters here in Montréal in late November.
64. I expect that some of you will find time before your Christmas to join us for this inaugural event, which will also include a special Forum component designed especially for students.
65. On that note, let me please now wish you all a very productive and engaging conference.
66. Thank you.