



**Address by
Dr. Fang Liu,
Secretary General,
to students of the Incheon Airport Aviation Academy,**

(Seoul, 12 August 2016)

1. Good morning everyone,
2. It has been a tremendous pleasure to receive such a warm, friendly and enthusiastic welcome to Seoul. I would like to take this opportunity to thank you all for your very gracious reception and to share my thanks and appreciation to the Government of the Republic of Korea for arranging and supporting this visit.
3. Your positive energy and outreach reminds me of the spirit in which the *Convention on International Civil Aviation* was drafted. As you may be aware, this document, also known as the *Chicago Convention*, is the agreement that founded ICAO and which continues to guide our work today.
4. The 54 nations which came together to draft the *Chicago Convention*, in the aftermath of the Second World War, understood above all that international air transport could be a tremendous instrument for peace, cooperation and friendship in the world.
5. And in the decades since the *Convention* first enshrined its noble vision, civilian aircraft have brought together the world's peoples, languages, ideas, and economies to a degree never before witnessed in human history.

6. In this sense, it's easy to understand why Bill Gates once referred to the airplane as humanity's "very first World Wide Web."
7. The *Convention* calls on ICAO and our Member States to not just ensure the safety and security of the international civil aviation network, but also to promote its sustainable development.
8. And working together at the international level, through ICAO, we have greatly succeeded in achieving this mandate.
9. For instance in ICAO's now more than seven decades of serving States and the global aviation community, over 12,000 civil aviation Standards and Recommended Practices (SARPs) have been agreed to.
10. As many of you are likely aware, these SARPs and policies are used by ICAO Member States to ensure that their local civil aviation operations and regulations conform to global norms – in other words our Standards are essential to the ability of civil aviation to function as a truly global network.
11. In addition to our core work resolving international SARPs and policies, ICAO also produces global plans to coordinate multilateral strategic progress for safety and air navigation; we monitor and report on numerous air transport sector performance metrics to aid State and industry planners; and importantly we audit States' civil aviation oversight capabilities in the areas of safety and security.
12. As the aviation network has expanded across the globe, linking not just countries but also the remote areas and communities within them, no less than 191 States have become Members of ICAO. This means that almost the entire planet now shares our vision for global aviation.

13. Amongst our Member States, the Republic of Korea was quick to perceive the importance of the Convention and its objectives for the world. Korea was a very early signatory, joining ICAO in 1952.
14. Since then, your country has made significant contributions to our work and to the benefit of international aviation's network and community.
15. I would point out in this regard that your country has been represented on ICAO Council continuously since 2001. Composed of 36 of our 191 Member States, the Council is our chief governing body during the three-year periods between our Assemblies, when all ICAO States join us at our Headquarters in Montreal.
16. One of the Council's major duties is to adopt international Standards and Recommended Practices and annex them to the Convention. It was also responsible for electing me as ICAO Secretary General.
17. The fifteen years since Korea joined the Council have been a period of rapid change for the aviation industry, and therefore for ICAO.
18. We have been required, for example, to enhance and focus our work on counter-terrorism and security in the aftermath of the 9/11 terrorist attacks in New York in 2001, a matter which remains of key importance to this day.
19. We have seen the vast expansion of low-cost carriers and air traffic overall, which has called for significant re-engineering of airspace and re-development of aviation infrastructure.
20. We have been impacted by aircraft accidents and geo-political events which have called for both technical and diplomatic innovations, for instance on the global aircraft tracking framework which was established after the tragic disappearance of MH370, or the rapid response we

undertook to improve conflict zone information sharing after the loss of Flight MH17.

21. And obviously, the world is ever more conscious of the need to reduce our impact on the environment, an area where aviation is committed to do its part and has a very admirable historic record of success.
22. The Republic of Korea has significantly and generously contributed to all of our work throughout this time, but one area of special importance to me has been its generous training of hundreds of aviation professionals from many more developing countries.
23. We only need to look around the magnificent facilities here to see that these contributions continue to benefit subsequent generations. And it's very important that aviation in general continues to focus on human resources development, given how rapidly our sector is growing today.
24. Supporting over 58 million jobs worldwide, and some 2.4 trillion dollars in global GDP, civil aviation flights also carry over half of the 1.1 billion tourists who travel across international borders each year – a figure which rises to over 80 per cent for remote countries and small island states.
25. In total, however, air transport carried more than 3.5 billion total passengers in 2015 – on over 100,000 flights per day.
26. These same aircraft transported some 35 per cent of world trade by value, highlighting how essential rapid air transport is to next-day deliveries or the establishment of global markets for perishable and other time-sensitive goods.
27. Together, these combined impacts from international air transport operations help States and communities to become full members in the global economy and global community, and to enjoy the benefits for their citizens and businesses in terms of being able to connect to the world.

28. In short, effective compliance with ICAO Standards and Recommended Practices, and proper alignment with our policies and strategies, are the basic prerequisites for accessing the global aviation network and all the socio-economic developmental opportunities it provides.
29. The fostering of cooperation amongst States to improve alignment with ICAO, and compliance with our network's requirements, is one of our core mandates.
30. In turn, ensuring our standards, policies and strategies are designed to foster the sustainable development of this network well into the future is an equally important one.
31. Sustainable development is not just a catchphrase. It is a serious, necessary and well-defined principle upon which truly effective and comprehensive growth strategies must be defined.
32. In terms of the air transport sector, it is about ensuring that aviation can continue to lift generations out of poverty and support the development of advanced economies, as it has since aircraft began carrying the first passengers from one country to another.
33. Sustainable development sits on three pillars of equal importance: an economic pillar, a social pillar, and an environmental pillar. As a United Nations agency, ICAO pursues related objectives in a manner fully coordinated with the UN's *Agenda 2030* and its visionary Sustainable Development Goals, or 'SDGs'.
34. If you have not yet explored the 17 SDGs under *Agenda 2030*, I would encourage you to do so. They are critical to the healthy and vibrant future of our planet and its peoples, and in that sense they are also key to the future of each and every one of us – but especially our younger generations.

35. Speaking to you today, I'm reminded specifically of SDG 8: *Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.*
36. ICAO is supporting the achievement of this goal by promoting the accessibility of careers in aviation, such as the exciting and rewarding careers that you are about to embark on, but also by supporting the use of air connectivity as a means for enhancing local development and industries such as tourism.
37. Yes, the sustainability of aviation is facing many challenges, particularly as we continue to forecast tremendous worldwide growth.
38. The more than 100,000 daily flights now managed by our network which I mentioned earlier will surpass 200,000 in just the next 14 years.
39. The challenge is particularly great here in the Asia-Pacific Region due to its especially rapid expansion. Many of you may not realize, for instance, that this is largest air transport passenger market in the world today.
40. This is one of the reasons why your decision to pursue a career in aviation is so important to our global network, and why it is just as important that everyone in aviation, from organizations like ICAO to airlines, airports and others, do more to attract other young and talented candidates to follow your example.
41. ICAO coordinates these human resources development efforts through our Next Generation of Aviation Professionals programme, or NGAP as we call it.

42. The importance of NGAP to aviation is critical, as we already know that the demand for aviation professionals will exceed supply. This is due to a number of factors.
43. Firstly, we are confronting many retirements amongst the current generation of aviation professionals. This includes pilots, controllers, maintenance staff, and the managers who lead them.
44. Secondly, we have found that aviation faces much more competition today for the talented candidates we need to run our very complex global system. There are many more areas of human endeavour which now require highly skilled applicants, and we must ensure we attract as many new aviation professionals as are required.
45. Thirdly, training capacity – and by that I mean the number of spaces in academies like this one – is insufficient to meet future demand. Moreover, the training that exists is sometimes too expensive or does not meet students' expectations in terms of teaching methodology.
46. Finally, we have identified that there is little awareness amongst youth of the wide variety of aviation professions available.

47. ICAO and aviation industry groups have therefore been developing various forecasts to gauge the needs for the future. Information from State Civil Aviation Authorities, as well as manufacturers such as Boeing and Airbus, have been instrumental in helping us to determine the number and types of professionals needed to operate our aviation system.
48. What we found will astound you. Aviation is in fact expected to require over one million professionals – pilots and technicians – within the next twenty years, and that number is expected to continue growing each year.
49. One of the earliest outcomes of the launch of NGAP was the revision of our Civil Aviation Training Policy. This in turn led us to launch of what we called the TRAINAIR PLUS programme.
50. Allow me to take a moment here to express ICAO's gratitude to the Incheon Airport Aviation Academy for being one of the first training centres to join the TRAINAIR PLUS Programme, and for being one of the most active Members since the start of the Programme.
51. As an ICAO Regional Training Centre of Excellence, this facility has demonstrated strong commitment towards the enhancement of aviation training.
52. ICAO's TRAINAIR PLUS Programme is in fact key to ICAO's support and strategic coordination on human resources development and our alignment of our training activities with our global objectives.
53. TRAINAIR PLUS achieves this through its standardization of high-quality training packages and harmonisation of training approaches. This drastically reduces costs for aviation training providers and participants all over the world.

54. The fast-growing TRAINAIR PLUS network brings together today a community of over 90 Members, distributed across 70 ICAO Member States. Taken together, this network is making significant contributions to training capacity and the identification and alignment of core competencies needed by aviation professionals.
55. Close to 1,000 course developers have been trained through this programme to-date, which greatly enhances the standardization of course development among training centres.
56. Additionally, more than 200 instructors were trained last year alone, and these numbers are steadily increasing.
57. We are now training the specialists who manage training organizations, ensuring these are operated in accordance with internationally accepted standards.
58. Moreover, we are continuously working to broaden and deepen the relevance of the programme.
59. The ICAO Global Aviation Training Office has been working with TRAINAIR PLUS Members and industry partners to develop new courses or have existing ones reviewed and recognized by ICAO.
60. Additionally, the training course development plan that we launched last year has broadened our training package categories.
61. On that note, let me return to the overarching goals of the NGAP programme, as the NGAP objectives directly support these needs.
62. The NGAP Programme's main objectives include:

- The establishment of strategies to attract, educate and retain aviation professionals.
 - Providing assistance to States and industry so that they can engage the next generations and promote aviation to them as a viable career.
 - And establishing a global forum to assist States and industry in identifying their long-term human resources needs.
63. These objectives are of such significance that the NGAP programme has in fact been incorporated into the ICAO Business Plan and ICAO's Global Plans for Aviation Safety and Air Navigation capacity and efficiency.
64. But in order for the NGAP Programme to be successful in achieving these objectives, greater participation, cooperation and support from States, international organizations, industry, and academia is required.
65. This means it is necessary to enhance awareness of the importance of gender equality, effective human resources planning, and effective human resources development.
66. It also means going beyond planning. It clearly calls for actual youth engagement.
67. NGAP is providing us with a platform to work with stakeholders to develop this engagement.
68. Broadly speaking, promoting aviation as an attractive career option to youth starts with opening communication within the aviation community and initiating cooperation with educational bodies.
69. We must also target youth as early as possible through science, technology, engineering and math (STEM) initiatives. Education in these areas promotes

children's ability and inclination to innovate, and provides young people with critical problem-solving abilities and analytical skills.

70. The relevance of these classroom skills can also easily be demonstrated in their everyday lives, and these "real-life" applications encourage the development of a virtuous cycle of curiosity and learning.
71. ICAO and its partners are currently promoting aviation by participating in various aviation forums, developing communication and publicity tools, and engaging directly with students and educators.
72. This work, targeting youth of all ages, is being undertaken by an extensive network of volunteers composed of industry experts, technical and training experts, and educational professionals. They are coordinating through NGAP.
73. To give just two examples, our recent activities have included supporting the organization of first ever Youth Aviation Forum that was held in February of this year, and participating in the Student Education and Careers in Aviation component of the latest World Aviation Training Conference.
74. Our participation in this Conference included a panel session featuring representatives from manufacturers, airline management, cabin crew and ICAO, interaction with training organizations in the exhibit hall, and an afternoon session that enabled students to interact directly with aviation professionals and discuss real-life experiences and scenarios.
75. The Youth Aviation Forum took place in Cameroon and was organized under the initiative and leadership of the Young African Aviation Professionals Association.

76. With support and representation from ICAO and IATA – the association of world scheduled airlines – students of all ages learned about aviation and the variety of aviation professions available. Discussions also covered gender equality and the need to foster cooperation amongst African States on aviation issues.
77. The Young African Aviation Professionals Association plans to hold more events in the region and to establish an exchange programme that would enable aviation professionals to have on-the-job experiences around the continent, in a variety of aviation organizations and companies.
78. ICAO is also supporting an important initiative that will launch later this month, one that is focused on highlighting the importance of STEM education access for women and youth around the world.
79. It is called the ‘Dreams Soar’ Initiative.
80. Capt. Shaesta Waiz, who just turned 29, is the driving force behind Dreams Soar. This young woman is the first civilian female pilot from Afghanistan. She is seeking to empower women and youth around the globe by drawing attention to STEM education through a historic, solo flight around the world.
81. Along the route, Capt. Waiz will team with inspiring women and together they’ll host outreach events focused on careers in STEM fields. The initiative will encourage women worldwide, and especially young women, to believe in themselves and to allow their ‘dreams to soar’.
82. Initiatives such as Dreams Soar and the others I’ve mentioned are invaluable to engaging the next generation of aviation professionals.

83. As ICAO and its stakeholders move forward with the NGAP Programme, the goal is to expand participation and involvement in projects, activities and events.
84. Representatives and supporters from different organizations, backgrounds and countries will help to provide a robust platform for developing and sharing strategies for engaging and retaining the next generation.
85. Each region, and in fact each country, has its own economic, cultural and social factors that impact a person's decision to work in civil aviation.
86. We need to understand what those factors are in order to provide better access to information about our industry, better access to training and education in civil aviation, and ultimately to help the next generation take advantage of the opportunities that exist.
87. We also need to listen to what the next generation tells us about their aspirations.
88. And just as importantly, we need to share our passion about working in civil aviation.
89. In the coming years aviation will have many challenges to face, but it is my goal to ensure that ICAO has the vision and commitment to meet them head on, and to see to it that they benefit our network as much as possible.
90. I have mentioned already the need to promote aviation's role in sustainable socio-economic development, and to assist States so that they can realize all of aviation's many benefits, but there will also be a need to manage the safe integration of the newly emerging technologies and operations concerning space and sub-orbital travel, and remotely-piloted aircraft.

91. The introduction of Air Traffic Flow Management to ensure network efficiency, how we gather and leverage Big Data, and our preparation of collaborative preventative measures against cyber threats would be further important examples of how ICAO is anticipating leading-edge issues.
92. Just as always, the fostering of international partnerships and cooperation will remain the backbone of ICAO's work, and the most important aspect of how well civil aviation continues to serve as such an incredible force for greater peace and prosperity in the world.
93. Dear students, in closing today, let me please highlight that I have immensely enjoyed discovering more about your school and your motivation to become the next generation of aviation professionals.
94. I implore you to push your passion and energy beyond the walls of this great institution, and to encourage others to pursue what we all know will be tremendously rewarding and exciting careers in aviation. Careers like mine, for instance, and like the ones which you are all about to embark on.
95. As we are very much aware, nothing can replace your personal commitments to work hard for what you dream of attaining, and I commend and applaud the significant efforts you have all made to get to this stage in your development.
96. It has been a very great pleasure for me to be able to discuss these important issues with you today, and to hopefully inspire you to even greater ambitions and accomplishments in the future.
97. Who knows after all: it could easily be one of you sitting in this chair as ICAO's Secretary General at some point in the future.

98. I wish you all very productive, exciting, and truly rewarding aviation careers in the dynamic years ahead.
99. Thank you.